Nevada Flood Risk Portfolio

CNMS Map Book

Executive Summary

The Coordinated Needs Management Strategy (CNMS) is a Federal Emergency Management Agency (FEMA) initiative to update, organize, store, and analyze flood hazard mapping needs information for communities. FEMA is mandated by the National Flood Insurance Reform Act of 1994 under Title 42 of the U.S. Code Section 4101(e) to assess and determine which Flood Hazard Maps need to be revised every five-years. Revisions to floodplain risk zones are dependent upon the identification of instances where information on Flood Insurance Rate Maps (FIRMs) does not reflect current risks in flood-prone areas.

The Nevada Floodplain Management Program, acting as a Cooperative Technical Partner (CTP) with FEMA, has created this Nevada CNMS Map Book, a component of the Nevada Flood Risk Portfolio, which depicts detailed community maps and attached data tables, to assist communities in utilizing CNMS information and to invite local input on mapping needs for the map update process. In many cases, Nevada's flood insurance studies are digital conversions of historic Flood Hazard Boundary Maps or a re-delineation of historic engineering studies. Often times the original engineering studies have been carried forward several Flood Insurance Rate Map (FIRM) revisions and, therefore, may be 20-30 years old. Due to the changing nature of the landscape, engineering standards, availability of refined data, and development, timely updates to Special Flood Hazard Area (SFHA) information on FIRMs becomes necessary to maintain accuracy and relevance.

The CNMS is a geospatially-enabled database which enables users to view, scrutinize, and update their study records inventory. The Nevada CNMS Map Book is a tool which can assist local communities with understanding and evaluating existing data in the CNMS as well as capture and document Validation Element changes, due to changes in the Physical environment, Climate patterns, and Engineering (PCE) factors. The Nevada Floodplain Mapping Coordinator, acting as a CTP, can facilitate transfer of local data to the FEMA CNMS dataset. Validity of flood hazard studies is determined by identifying study attributes and change characteristics, as specified in the Validation Checklist. These changes are evaluated for seven critical elements and ten secondary elements. Any UNVERIFIED flood study, a study with identified deficiencies, will warrant a review for inclusion in the map production planning process.

Additionally, FEMA will utilize the CNMS Study Records as a tool for performing RiskMap (Risk Mapping, Assessment, and Planning) Discovery and Scoping tasks and to help identify the portions of FEMA's inventory of studies that would warrant a re-study.

At this time, information in the CNMS database is limited to detailed study areas (Zones AE, AO, AH) and provides little, or no, insight on the FIRMs depicted, in Nevada, as approximate Zone A (approximate studies).

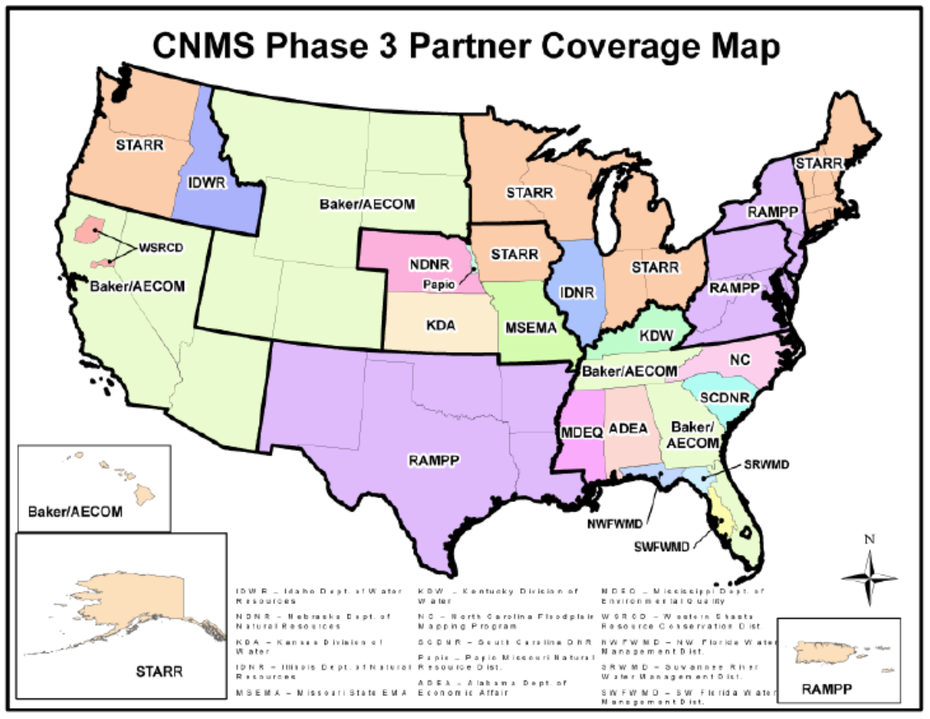

FIG.1 **Entities responsible for validation of the CNMS inventory in the most recent revision and enhancement.**

[Many Critical or Secondary Elements used in validation process were determined without community level knowledge. The Nevada Floodplain Management Program supports integration of local knowledge into the National CNMS Database and is the reason for the Nevada CNMS Map Book.]

Nevada CNMS Map Book and Associated Tables:

The Nevada CNMS Map Book is a collection of maps and tables which depict Special Flood Hazard Areas (SFHAs) throughout Nevada, their supporting engineering methods, and their validation information. The areas selected for depiction in this map book were based on the presence of Flood Insurance Rate Map Zone AH, Zone AO, or Zone AE, which were determined through detailed analysis. These detailed studied SFHA Zones are currently the only areas having information populated in the CNMS database and are typically located near populated places. Validity of approximate studies (Zone A) is to be assessed using the Validation Checklist to the greatest extent possible. It may not be appropriate to utilize the entire Validation Checklist for effective approximate studies, unless the technical data, methodology, and basis for the study are known.

The maps utilize the modern FEMA Digital Flood Insurance Rate Map (DFIRM) information for the delineation of High Hazard Flood Zones. The maps depict CNMS stream centerlines that correspond with different flood zone types, as well as SFHA and floodway delineations displayed over aerial imagery at various scales. Different colors were used to symbolize the SFHAs determined by detailed methods versus areas determined by approximate analysis (Approximate Zone A). FEMA's CNMS Studies Inventory (S_Studies_Ln), current as of October, 2012, geospatial information was manipulated and simplified for map display and inclusion in the data tables. The original dataset is comprised of many separate line segments for each study reach. To simplify the possible 10 to 100 records for each map, line segment duplications were removed to minimize the data tables and were symbolized identically to improve comprehensibility of the stream centerline data on the map.

Five categories (features from the CNMS dataset) were selected for review to ensure duplicates were truly representing the identical studied area. Stream Name, Date of Effective Analysis, Validation Status, Hydrologic Model, and Hydraulic Model were accessed in an Excel spreadsheet after the migration from ArcGIS. The remaining study information is representative of the current validation elements and details for the entire study area. To reference the geospatial CNMS S_Studies_Ln to the data table, (two) features were selected for unique symbolization. SFHA Zone type and Date of Effective Analysis were used to color code the different detailed study zones on the map and are listed under "CNMS Streams", in the Map Legend, for graphical recognition and interpretation. Other information is displayed on the map as well and may be developed for additional purposes.

The data tables lists Study Reach Engineering and Modeling Information. These study specific details are useful for reviewing and assessing the validity of the engineering analyses which support existing flood hazard mapping. For example, data values for fields such as the Date of Effective Analysis, and the types of Modeling used, can aid a community in a validation review and help with estimating the amount of work required to duplicate the current effective hydraulic and hydrologic modeling.

Definitions

CNMS Database	The CNMS database is stored in an ESRI file geodatabase format. Version 5.1 is comprised of the following tables: Studies Inventory (S_Studies_Ln), Requests (S_Requests_Pt and S_Requests_Ar), County Status Table (County_Status), and unmapped streams not in FEMA's SFHA inventory (S_Unmapped_Ln).
CNMS Inventory	The CNMS Inventory includes flooding source centerlines representing FEMA's modernized inventory of Flood Insurance Rate Maps. One feature class associated with the CNMS Inventory is S_Studies_Ln. The CNMS S_Studies_Ln documents the engineering analysis used in the creation of FEMA's Special Flood Hazard Area (SFHA). The centerlines enable calculation of New, Validated, or Updated Engineering (NVUE) metrics, and are reported to Congress.
CNMS Study Record	A CNMS Study Record represents the most current knowledge of a mapped SFHA in FEMA's inventory, or a stream considered for inclusion in FEMA's SFHA inventory. The CNMS database feature class for CNMS Study Records is S_Studies_Ln.
Validation Status	Validation Status characterizes the engineering and mapping data used in FEMA's FIRMs evaluated against the specifications provided in this document. This evaluation could result in a Validation Status of VALID (targeted condition), UNVERIFIED (requires map update investment), or UNKNOWN (needs further investigation). It is assigned for each CNMS Study Record
UNKNOWN Validation Status	An UNKNOWN Validation Status is assigned to existing detailed and approximate flood hazard studies for which a CNMS evaluation is planned and in queue, currently being assessed under CNMS, or when CNMS evaluation is deferred. An UNKNOWN Validation status is also assigned to those studies for which inaccessibility of information results in an incomplete evaluation of the 17 CNMS elements. In such cases, the UNKNOWN Validation Status may only be assigned after due diligence research has been performed.
UNVERIFIED Validation Status	An UNVERIFIED study has not passed the Critical and Secondary Element checks part of the Validation Checklist and may either be assigned resources for restudy in a future fiscal year or is currently being restudied.

Review of Study Records

The Nevada CNMS Map Book tables were created to aid in a community level review of CNMS Study Records. Not all of the Critical or Secondary elements are suggested for review at the community level. There are many elements that can be reviewed at the state level, to limit the time required of a community official for a local review. However, all of the information on the studies and complete validation review information is provided. In each element review, whether changing a study record or not, any associated information found useful in the review process should be documented; blank columns have been created in the data tables for this use. Additional information may be noted in support of any changes to the studies records that may be used in future reviews, and to improve the CNMS database. Validation process documentation is necessary to ensure that the flooding source being evaluated has a record of the criteria being evaluated, and the data source used in the evaluation of those criteria is reliable. Source data should be documented outlining originator, location (URL, local drives), digital availability, and whether it can be shared or distributed.

The Table below suggests a straightforward workflow to review and assess some complex Hydrologic and Hydraulic engineering inputs. The materials desirable for this review include; the Nevada CNMS map page and the data table. This page, the FEMA Flood Insurance Study, local knowledge, and a computer with the ability to view flood maps over imagery. The notation corresponding to each element refers to Critical and Secondary Review elements; for example "C4" refers to Critical Element 4 (see page VI for definitions).

Suggested Elements for Review at the Local Level:	**Suggested Review Procedure:**
(C4) Addition/removal of a major flood control structure	(C4) This likely would have been documented in CLOMR/LOMR/PMR process. For this review, compare the date of the effective analysis from the flooding source's study records downstream/upstream of the flood control structure. The date of effective analysis should correspond to the time period when any major control structure work was done in the last 30 yrs.
(C5) Current channel reconfiguration outside effective SFHA	(C5) This review is mainly accomplished through visual examination, with the use of aerial imagery and Digital Flood Mapping product overlays. ArcGIS, Google Earth, with the National Flood Hazard Layer, and other computer programs may help achieve this task. The most recent aerial imagery available may show changes in the stream course that differ from the effective flood maps and would suggest a mapping update need.
(C6) Five or more new or removed hydraulic structures (bridge/culvert) that impact Base Flood Elevations (BFEs)	(C6) This review is based on the Flood Profiles found in the Flood Insurance Study. The profiles were developed during the Hydraulic Analysis and will share the same date as the date of effective analysis. Judgment should be used in considering the age of the engineering study and the amount of development/construction/rehabilitation in this SFHA area in review. Some survey information used in the past is not as comprehensive as present equipment can gather. The profile should reflect not only bridges/culverts, but also roads and other structures that would have an influence on the way water flows in a 1% annual chance flood event.
(C7) Significant channel fill or scour	(C7) This review is to determine if hydraulically significant fill or scour occurred along a specific stream reach since the date of effective analysis. Somewhat subjective, review any survey information, stream gage datum shifts, photos, and other related materials to sustain this claim. May have to ask FEMA what is considered "significant fill" on a case by case basis.
(S4) One to four new or removed hydraulic structure (bridge/culvert) that impact BFEs	(S4) see review procedure (C6) above
(S5) Channel improvements	(S5) This review consists of documenting any channel improvements from the date of effective analysis. Channel improvements can consist of straightening, rerouting, concrete lining, rip-rap, and dredging. Projects such as vegetation removal or debris removal may be dependent on the scale the project and may require FEMA consent before changing this study record
(S6) Availability of better topography/bathymetry	(S6) LiDAR surveys are compiled in a statewide inventory by the State Floodplain Management Program and used for this review at the state level. For this local level review any locally developed topography (such as Photogrammetry, GPS surveys, etc.) should be documented and compared to the topography used in the effective analysis, but when assessing for re-delineated streams, account for topography used during redelineation (mainly 10m Digital Elevation Models from the USGS or 5m IFSAR data)
(S9) Significant storms with High Water Marks (HWMs)	(S9) For this review, determine if HWMs have been recorded on the flooding source since the effective analysis.

Suggested Elements for Review at the State Level	Notes:
(C1) Major change in gage record since effective analysis that includes major flood events	(C1&2) GIS analysis for gage info, then compare study record vs. gage history, if >25% increase in gage history Run PeakFQ (these tasks should be aligned, foresee not too many studies where this would be appropriate)
(C2) Updated and effecive peak discharges differ significantly based on confidence limits criteria in FEMA's Guidelines and Specifications	(C3) Detailed knowledge of FEMA's Guidelines and Specifications may be needed. (not many appropriate area, however some places used engineering determinations without documentation)
(C3) Model methodology no longer appropriate based on Guidelines and Specifications	(S1) (foresee not many appropriate areas)
(S1) Use of rural regression equations in urbanized areas	(S2) GIS analysis with NFIP claim data, intersect with SFHA.
(S2) Repetitive losses outside the SFHA	(S3) USGS National Land Cover Datasets, (foresee not many areas that are close to 50% level)
(S3) Increase in impervious area in the sub-basin of more than 50 percent (i.e., 10 percent to 15 percent, 20 percent to 30 percent, etc.)	(S6) State wide LiDAR inventory, continue building and cross check FEMA minimum standards
(S6) Availability of better topography/bathymetry	(S10) None newer than the 1980s, working to build support for USGS project to update these
(S10)New regression	

CNMS STUDY LINE VALIDATION CHECKLIST	
WATER NAME	This attribute provides a geographic place name reference.
FLOOD ZONE	Zone type of the SFHA the polyline represents (ex. Zone AE, Zone A) from FIRM
VALIDATION STATUS	This attribute establishes the latest evaluation condition of a flooding source centerline in relation to the criteria set forth in the CNMS User's Guide, any procedure memorandums, or previous work. Used to categorize the Inventory for the purposes of planning, study selection, tracking and reporting.
STATUS TYPE	This attribute establishes the sub-categories for each of the Validation Status classes of a flooding source centerline in relation to the criteria set forth in the CNMS User's Guide, any procedure memorandums, or previous work.
STATUS DATE	Date when CNMS stream reach validation is completed or a validation assessment of the stream reach has been made. UNVERIFIED records will have the date the CNMS evaluation triggered the UNVERIFIED status. If an unverified study becomes VALID, the date of the status change is recorded. Determine the most recent analysis and condition of the polyline. Will track and maintain the currency of the inventory, to insure all requirements are being adhered to according to mandates set forth within the NFIP.
STUDY TYPE	Study type of the SFHA, represented by the reach and based on the current effective FIS text.
DATE OF EFFECTIVE ANALYSIS	This date field will be used to document when the effective study was produced, because there can be much time between when the study was created and when it went effective. Age of maps does not adequately reflect the age of the analysis, as a study can be published on multiple effective maps without change. At times, the date that the analysis first went effective is sufficient as well, especially when supporting data is sparse. This date will be evaluated for age of analysis of the effective study.
HYDROLOGIC MODEL	Hydrologic model used for the effective study for reference and evaluation.
HYDRAULIC MODEL	Hydraulic model used for the effective study for reference and evaluation
IS MODEL IN HODIGITAL FORMAT	Is the effective study's hydrologic model in digital format? (NO/YES/UNKNOWN) Yes or no is expected to indicate whether the data are digital or not. Evaluation of the data relative to the expected effort associated with use of the data
IS MODEL IN HADIGITAL FORMAT	Is the effective study's hydraulic model in digital format? (NO/YES/UNKNOWN)
CAN HODIGITAL MODEL BE RUN	Can the effective study's Hydrologic digital model be run? (NO/YES/UNKNOWN) Yes or no is expected to indicate whether the data can be run in a model. Evaluation of the data relative to the expected effort associated with use of the data.
CAN HADIGITAL MODEL BE RUN	Can the effective study's Hydraulic digital model be run? (NO/YES/UNKNOWN)

CRITICAL ELEMENTS FOR REVIEW	
Has there been a major change in gage record since effective analysis?	**Critical Element 1**, Change in gage record. Major change in gage record since effective analysis that includes major flood events? (NO/YES/UNKNOWN) NOTE: Users may indicate change in rainfall record or other climatologic data in this field if gage data is not available, but other precipitation indicators are available. Investigate the existence of gages along the reach. Record all gages near or on the stream reach and gages listed in the Flood Insurance Study.
Is there a significant increase in Period of Record?	**Critical Element 2**, Change in Discharge. Updated and effective peak discharges differ significantly, based on the confidence limits criteria in FEMA's *Guidelines and Specifications for Flood Hazard Mapping partners?* (NO/YES/UNKNOWN) This YES/NO field is to capture whether or not updated and effective peak discharges differ significantly, based on FEMA's current confidence limits criteria since the effective analysis was completed. Look at the years of record for each gage. The FIS may reveal how many years of record were used in the model. Gage data are measured, compiled and served via web access by the USGS. The gage ESRI shapefile may reveal if there are continuous and updated years of record available. Determine if 100-yr discharge, obtained by running PeakFQ at effective date, is still within 68% confidence interval of the Bullet 17B 100-yr estimate, using updated gage data and PeakFQ. If not, Critical Element is set to 'YES'.
Is the Model Methodology no longer appropriate?	**Critical Element 3**, Model methodology. Model methodology no longer appropriate based on *Guidelines and Specifications for Flood Hazard Mapping partners* (i.e. one-dimensional vs. two-dimensional modeling; Coastal Guidelines)? (NO/YES/UNKNOWN) This YES/NO field is to capture whether or not the model methodology used to produce the effective analysis still meet current guidelines and specifications. This element is meant to ensure that proper methods were used to model stream and watershed; essentially matches H&H methods to basin and channel characteristics at time of Study Date.
Has there been an addition or removal of a major flood control structure?	**Critical Element 4**, Hydraulic Change. Addition/removal of a major flood control structure (i.e., certified levee or seawall, reservoir with more than 50 acre-ft storage per square mile)? (NO/YES/UNKNOWN) This YES/NO field is to capture whether or not there have been major flood control structures added or removed since the effective analysis was completed.
Is the current Channel outside of SFHA?	**Critical Element 5**, Channel Reconfiguration. Current channel reconfiguration outside effective SFHA? (NO/YES/UNKNOWN) This YES/NO field is to capture whether or not any channel reconfiguration, outside the effective special flood hazard area (SFHA), has been observed since the effective analysis was completed. NAIP or DOQQ imagery can be used to determine if the mapped SFHAs do not match the channel configurations on the aerial. If they do not match, record a YES. If you record a YES, be sure you can go back and state, with confidence, that the SFHAs do not match information on the aerial imagery. NOTE: when stating YES, you are saying that the floodplains on the map are no longer valid.
Have there been more than 5 new or removed structures that may impact a BFE?	**Critical Element 6**, Hydraulic Change 2. 5 or more new or removed hydraulic structures (bridge/culvert/roads) that impact BFEs? (NO/YES/UNKNOWN) This YES/NO field is to capture whether or not 5 or more new or removed hydraulic structures (bridge/culvert) that impact base flood elevations (BFEs) have been observed since the effective analysis was completed. Consider any combination of new and removed of 5 or more structures (i.e. 3 new and 3 removed), and structures not modeled or omitted from profiles. This should not be used to supersede the Letter of Map Revision process.
Has the channel area changed due to significant fill or scour?	**Critical Element 7**, Channel Area Change. Significant channel fill or scour? (NO/YES/UNKNOWN) This YES/NO field is to capture whether or not significant channel fill or scour has been observed since the effective analysis was completed.
SECONDARY ELEMENTS FOR REVIEW	
Does this study use rural regression in urbanized areas?	**Secondary Element 1**, Regression Equation. Use of rural regression equations in urbanized areas? (NO/YES/UNKNOWN) This YES/NO field is to capture whether or not a regression equation, intended for rural use, was used in an urbanized area. This field could indicate the incorrect use of a regression equation intended for rural areas in urban areas or could capture that urban sprawl has overtaken a once rural area, for which a rural regression equation model has been run.
Are there Repetitive losses outside SFHA?	**Secondary Element 2**, Repetitive Loss. Repetitive losses outside the SFHA? (NO/YES/UNKNOWN) This YES/NO field is to capture whether or not repetitive loss claims have been filed for properties outside the SFHA. If there are repetitive loss points, close to your reach and outside the SFHA, record a YES.
Has impervious areas in sub-basin increased > 50% ?	**Secondary Element 3**, Impervious Area. Increase in impervious area in the sub-basin of more than 50 percent (i.e., 10 percent to 15 percent, 20 percent to 30 percent, etc.)? (NO/YES/UNKNOWN) This YES/NO field is to capture whether or not there is a significant increase in impervious surface in the sub-basin since the effective study.
Has > 1 and < 5 structures been added or removed that may impact a BFE?	**Secondary Element 4**, Hydraulic Structure. More than 1 and less than 5 new or removed hydraulic structures (bridge/culvert/roads) impacting BFEs? (NO/YES/UNKNOWN) This YES/NO field is to capture whether or not there have been 1 to 4 new and/or removed hydraulic structures that impact BFEs since the effective study. This should not be used to supersede the Letter of Map Revision process. Can compare the flood profile between roads shown on imagery/transportation lines.
Has there been a channel improvement?	**Secondary Element 5**, Channel Improvements. Channel improvements / Shoreline changes? (NO/YES/UNKNOWN) This YES/NO field is to capture whether or not there have been any channel improvement or shoreline changing projects since the effective study. This should not be used to supersede the Letter of Map Revision process.
Is there the availability of better topography/bathymetry?	**Secondary Element 6**, Topography Data. Availability of better topography/bathymetry? (NO/YES/UNKNOWN) This YES/NO field is to capture whether or not there are new topographic data meeting FEMA minimum standards available since the effective study. Look into all the resources available to determine if newer and/or more accurate topographic data are available for the reach and record a yes, if you find updated topography (this will ultimately be based on whether or not the new topographic data meets FEMA's minimum standards and is better than what was used for the effective study. The investigation of 'YES's' should be performed with an engineer or manager). Communities with LiDAR data are an example of better available topography data.
Has there been a change to land use or vegetation?	**Secondary Element 7**, Vegetation or Land Use. Changes to vegetation or land use? This does NOT include urban change.Look at the NAIP (streaming) and other sources available to you to determine if the area has experienced changes to vegetation or land use since the effective study. (NO/YES/UNKNOWN).
Have there been significant storms with HWM's?	**Secondary Element 9**, High Water Mark. Significant storms with High Water Marks available following the effective study? (NO/YES/UNKNOWN).
Are new Regression equations available?	**Secondary Element 10**, Regression Equation. New regression equations available? (NO/YES/UNKNOWN).

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Portfolio Index for Nevada Communities

Nevada Detailed Community Index

Community	Watershed (HUC-8)	HUC Population	Page #
Lockwood	Truckee	358,422	1
Reno3 (Cold Springs, Red Rock)	Truckee	358,422	3
Reno4 (Lemmon Valley)	Truckee	358,422	5
Reno6 (Golden Valley, N. Virginia, 395)	Truckee	358,422	7
Reno7 (Sun Valley, N. Sparks)	Truckee	358,422	9
Reno8 (Verdi, Mogal, Summerset)	Truckee	358,422	11
Reno9 (Truckee River, Reno)	Truckee	358,422	13
Reno10 (Truckee River Sparks)	Truckee	358,422	15
Reno11 (SW Reno, Arrow Creek))	Truckee	358,422	17
Reno12 (SE Reno, Double Diamond)	Truckee	358,422	19
Sparks1 (Sun Valley, N. Sparks)	Truckee	358,422	21
Sparks2 (Red Hawk, Wingfield Springs)	Truckee	358,422	23
Sparks3 (Sparks)	Truckee	358,422	25
Sparks4 (East of Sparks)	Truckee	358,422	27
Sun Valley2 (Upper Sun Valley)	Truckee	358,422	29
Sun Valley3 (Lower Sun Valley)	Truckee	358,422	31
Carson City1 (NW Carson City)	Upper Carson	94,904	33
Carson City2 (NE Carson City)	Upper Carson	94,904	35
Carson City3 (Downtown)	Upper Carson	94,904	37
Carson City4 (E Carson)	Upper Carson	94,904	39
Carson City5 (S Carson, Hwy 50)	Upper Carson	94,904	41
Carson City6 (S Carson, Douglas County)	Upper Carson	94,904	43
Gardnerville	Upper Carson	94,904	45
Genoa	Upper Carson	94,904	47
Minden	Upper Carson	94,904	49
Pahrump1 (Northern Parhrump Valley)	Ivanpah-Pahrump Valleys	50,873	51
Pahrump2 (West, Hwy 372 and North)	Ivanpah-Pahrump Valleys	50,873	53

Nevada Detailed Community Index

Community	Watershed (HUC-8)	HUC Population	Page #
Pahrump3 (West, Hwy 372 and South)	Ivanpah-Pahrump Valleys	50,873	55
Pahrump4 (Pahrump)	Ivanpah-Pahrump Valleys	50,873	57
Golden Valley	Honey-Eagle Lakes	43,773	59
Carlin	Upper Humboldt	27,929	61
Elko1 (Downstream)	Upper Humboldt	27,929	63
Elko2 (Upstream)	Upper Humboldt	27,929	65
Wells	Upper Humboldt	27,929	67
Fallon1 (Upstream of Fallon)	Carson Desert	24,649	69
Fallon2 (Fallon)	Carson Desert	24,649	71
Dayton1 (Historic Area, Carson River)	Middle Carson	24,476	73
Dayton2 (Sixmile Canyon, Mark Twain Area)	Middle Carson	24,476	75
Silver City	Middle Carson	24,476	77
Silver Springs	Middle Carson	24,476	79
Winnemucca	Lower Humboldt	20,321	81
Fernley1	Granite Springs Valley	18,313	83
Ely	Spring-Steptoe Valleys	9,170	85
Mason	Walker	8,423	87
Yerington	Walker	8,423	89
Battle Mountain	Reese	4,527	91
Caliente	Meadow Valley Wash	4,496	93
Panaca	Meadow Valley Wash	4,496	95
West Wendover1	. Great Salt Lake Desert	4,429	97
Hawthorne	Walker Lake	3,785	99
Walker Lake	Walker Lake	3,785	101
Kingston	Northern Big Smoky Valley	1,661	103
Eureka	Diamond-Monitor Valleys	1,353	105

- The City of Las Vegas and surrounding areas are not included in this portfolio because the Clark County Regional Flood Control Disctrict works with FEMA separately from NDWR.
- Esmeralda County is not included in this portfolio because the county does not currently participate in the NFIP.

Portfolio Index Map of Watersheds

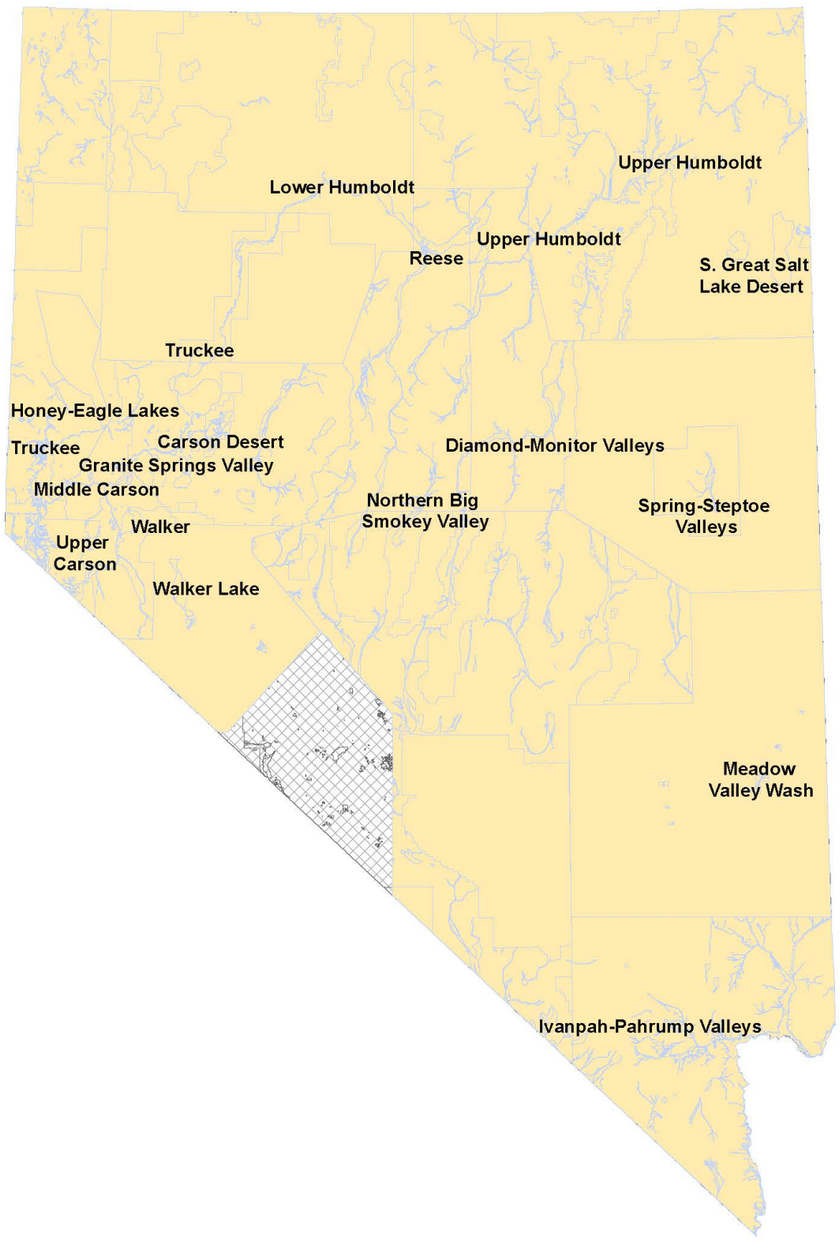


FIG 2: **Name and approximate location of the HUC-8 watersheds chosen for the CNMS Map Book Portfolio. River systems shown in blue.**

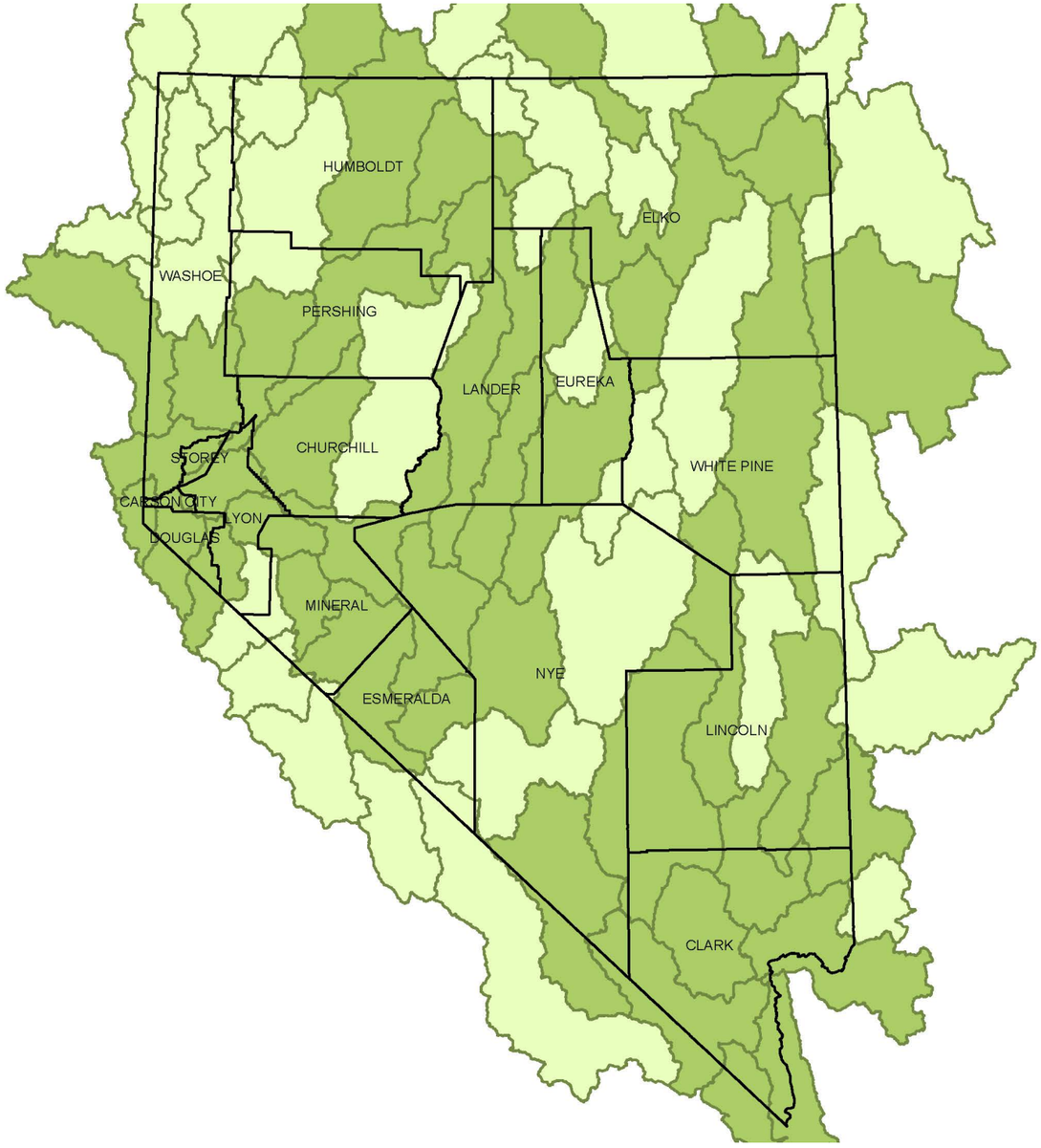
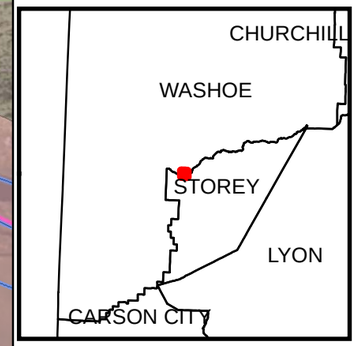


FIG 3: **HUC-8 watersheds chosen for the CNMS Map Book Portfolio shown in dark green.**

Lockwood 1



0 215 430 860 Feet

N

This entire map extent has LIDAR coverage

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

Lockwood CNMS Streams

Zones & Date of Effectivie Analysis

- AE, 11/1/1981
- AE, 7/19/1993

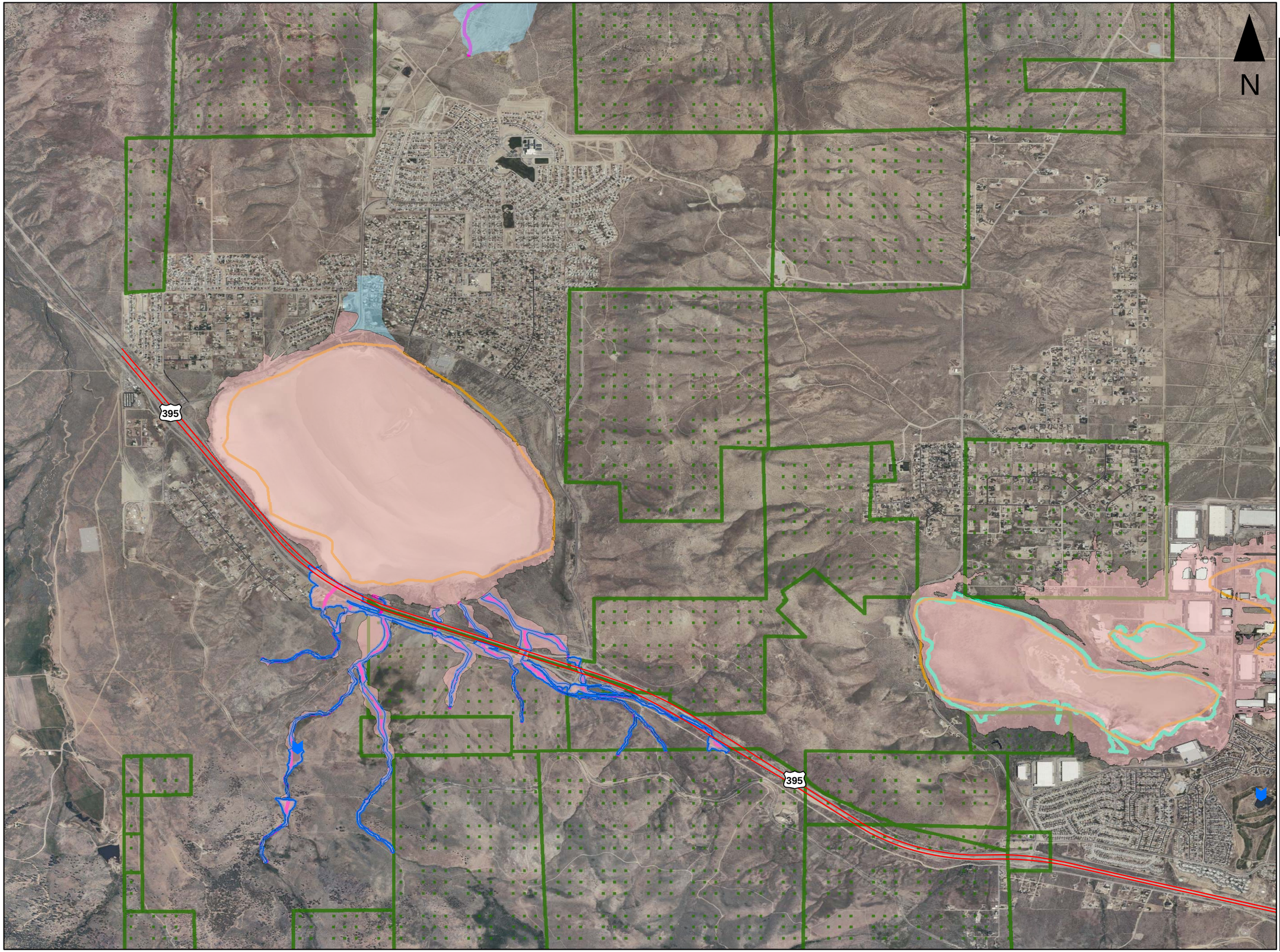
High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	**WATER NAME**	**Long Valley Creek**		**Truckee RIver**	
	FLOOD ZONE	**AE**		**AE**	
	VALIDATION STATUS	VALID		VALID	
	STATUS TYPE	NVUE COMPLIANT		NVUE COMPLIANT	
	STATUS DATE	2/14/2011		1/31/2011	
	STATUS TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	7/19/1993		11/1/1981	
	HYDROLOGIC MODEL USED	HEC-1	8/1/1990	OTHER	
	HYDRAULIC MODEL USED	HEC-2	8/1/1990	HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	NO		YES	
	IS MODEL IN HADIGITAL FORMAT?	NO		YES	
	CAN HODIGITAL MODEL BE RUN	UNKOWN		YES	
	CAN HADIGITAL MODEL BE RUN	UNKNOWN		YES	
Has there been a major change in gage record since effective analysis?		NO		NO	
Is there a significant increase in Period of Record?		NO		NO	
Is the Model Methodology no longer appropriate?		UNKOWN		UNKNOWN	
Has there been an addition or removal of a major flood controle structure?		UNKNOWN		UNKNOWN	
Is the current Channel outside of the SFHA?		YES		YES	
Have there been more than 5 new or removed structures that impact the BFE?		UNKNOWN		UNKNOWN	
Has the channel area changed due to significant scour?		UNKNOWN		UNKNOWN	
Does this study use rural regression in ubranized areas?		UNKNOWN		UNKNOWN	
Are there repetitive losses outside SFHA?		UNKNOWN		UNKNOWN	
Has impervious areas in sub-basin increased > 50%		UNKNOWN		UNKNOWN	
Has >1 and < 5 structures been added or removed that impact a BFE?		UNKNOWN		UNKNOWN	
Has there been channel improvements?		UNKNOWN		UNKNOWN	
Is there the availability of better topography/bathymetry?		UNKNOWN	YES - LIDAR, Truckee River Project	UNKNOWN	YES - LIDAR, Truckee River Project
Has there been changes to land use or vegetation?		UNKNOWN		UNKNOWN	
Have there been significant storms with HWM's?		UNKNOWN		UNKNOWN	
Are new regression equations available?		UNKNOWN		UNKNOWN	
		0		0	
		1		2	
				Hydro_Mdl=Rain Flood Prob. Curve	



Reno3

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Reno3 CNMS Streams

Zones & Date of Effective Analysis

- AE, 12/16/2009
- AE, 6/8/2013

High Hazard Flooding Areas

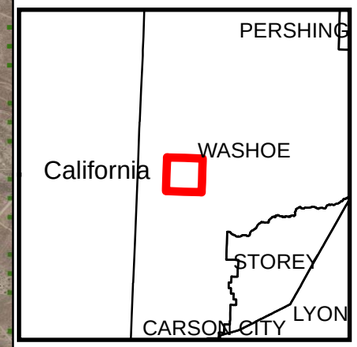
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	Silver Lake	211 CREEK	FLAT CREEK SPLIT	COPPERFIELD CREEK	6015 CREEK	WEST COPPERFIELD CREEK	FAT CREEK	6634 CREEK	FLAT CREEK	COLD SPRING	SHORT CREEK	
	FLOOD ZONE	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	AE	
	VALIDATION STATUS	VALID	UNVERIFIED	UNVERIFIED	UNVERIFIED	UNVERIFIED	UNVERIFIED	UNVERIFIED	UNVERIFIED	UNVERIFIED	UNVERIFIED	UNVERIFIED	
	STATUS TYPE	NVUE COMPLIANT	BEING STUDIED	BEING STUDIED	BEING STUDIED	BEING STUDIED	BEING STUDIED	BEING STUDIED	BEING STUDIED	BEING STUDIED	BEING STUDIED	BEING STUDIED	
	STATUS DATE	1/31/2011	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	7/31/2012	
	STUDY TYPE	UPDATED DETAILED	NEW DETAILED	NEW DETAILED	NEW DETAILED	NEW DETAILED	NEW DETAILED	NEW DETAILED	NEW DETAILED	NEW DETAILED	NEW DETAILED	NEW DETAILED	
	DATE OF EFFECTIVE ANALYSIS	12/16/2009	6/8/2013	6/8/2013	6/8/2013	6/8/2013	6/8/2013	6/8/2013	6/8/2013	6/8/2013	6/8/2013	6/8/2013	
	HYDROLOGIC MODEL USED	OTHER	HEC-HMS	HEC-HMS	HEC-HMS	HEC-HMS	HEC-HMS	HEC-HMS	HEC-HMS	HEC-HMS	HEC-HMS	HEC-HMS	
	HYDRAULIC MODEL USED	OTHER	HEC-RAS	HEC-RAS	HEC-RAS	HEC-RAS	HEC-RAS	HEC-RAS	HEC-RAS	HEC-RAS	HEC-RAS	HEC-RAS	
	IS MODEL IN HODIGITAL FORMAT?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
	IS MODEL IN HADIGITAL FORMAT?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
	CAN HODIGITAL MODEL BE RUN	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
	CAN HADIGITAL MODEL BE RUN	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
Has there been a major change in gage record since effective analysis?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Is there a significant increase in Period of Record?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Is the Model Methodology no longer appropriate ?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Has there been an addition or removal of a major flood control structure ?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Is the current Channel outside of SFHA?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Has the channel area changed due to significant fill or scour ?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Does this study use rural regression in urbanized areas?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Are there Repetitive losses outside SFHA?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Has impervious areas in sub-basin increased > 50% ?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Has there been channel improvements?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Is there the availability of better topography/bathymetry?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Has there been changes to land use or vegetation?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Have there been significant storms with HWM's?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Are new Regression equations available?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
	CE TOTAL	0	0	0	0	0	0	0	0	0	0	0	
	SE TOTAL	0	0	0	0	0	0	0	0	0	0	0	
	COMMENT	Bulk Validated - LOMR 09-09-0999P	Hydra model = HEC-RAS 4.1	Hydra model = HEC-RAS 4.1	Hydra model = HEC-RAS 4.1	Hydra model = HEC-RAS 4.1	Hydra model = HEC-RAS 4.1	Hydra model = HEC-RAS 4.1	Hydra model = HEC-RAS 4.1	Hydra model = HEC-RAS 4.1	Hydra model = HEC-RAS 4.1	Hydra model = HEC-RAS 4.1	

Reno4



N

395
395
673

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Reno4 CNMS Streams

Zones & Date of Effective Analysis

- AE, 11/1/1981
- AE, 12/16/2009
- AE, 7/21/2005
- AE, 8/1/1998

High Hazard Flooding Areas

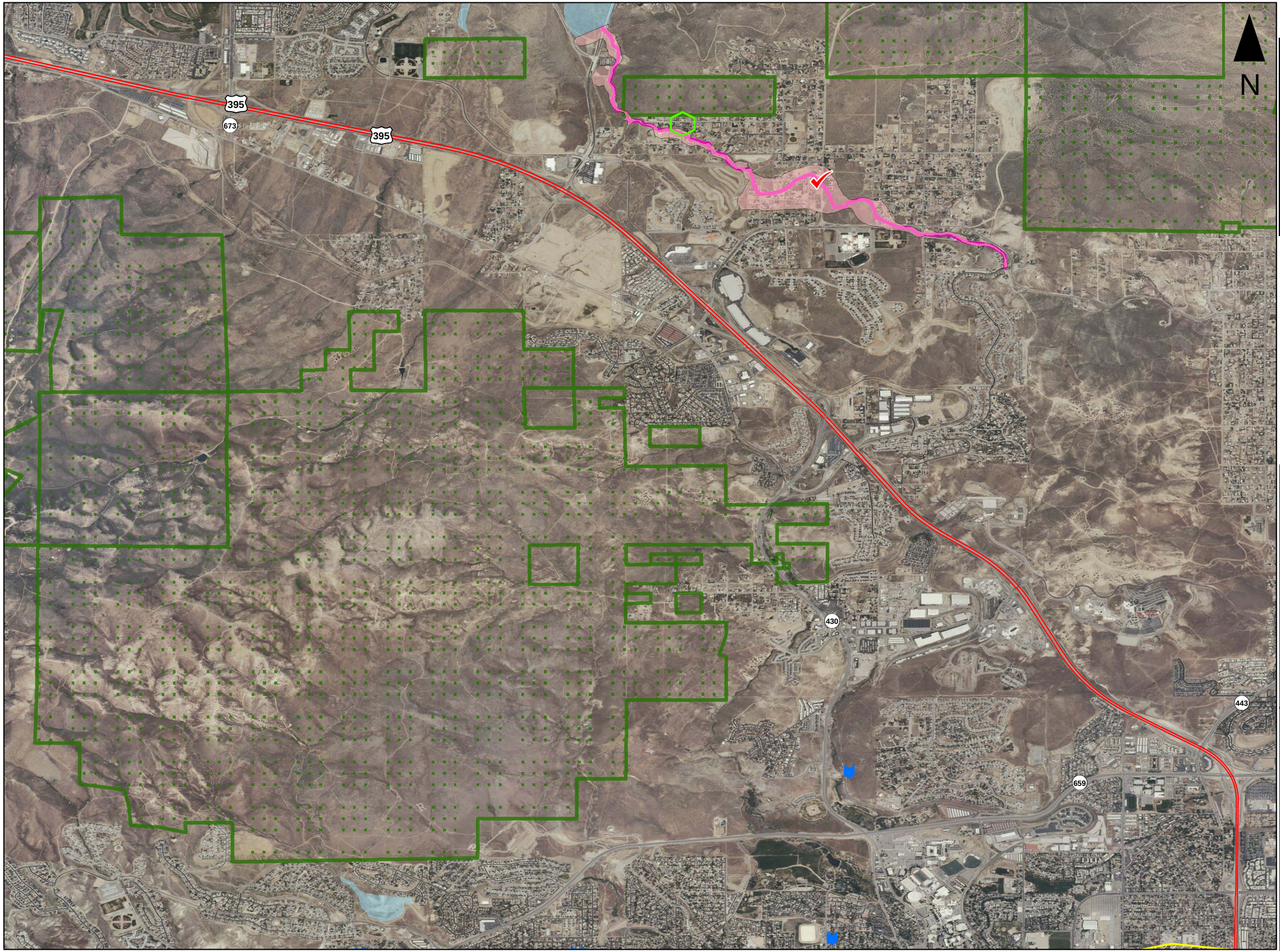
- Zone A (Approx)
- Detailed Studies
- Floodways

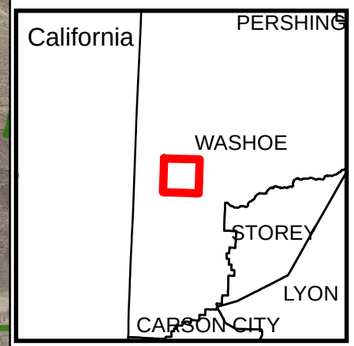
Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	Unnamed Tributary to Lemmon Valley Playa	AE Zone 2	Unnamed Tributary to Lemmon Valley Playa	Silver Lake	Golden Valley Wash	Unnamed Tributary to Lemmon Valley Playa	
	FLOOD ZONE	AE	AE	AE	AE	AE	AE	
	VALIDATION STATUS	VALID	VALID	VALID	VALID	UNVERIFIED	VALID	
	STATUS TYPE	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	TO BE STUDIED	NVUE COMPLIANT	
	STATUS DATE	1/31/2011	1/31/2011	1/31/2011	1/31/2011	1/31/2011	1/31/2011	
	STUDY TYPE	UPDATED DETAILED	UPDATED DETAILED	DIGITAL CONVERSION DETAILED	UPDATED DETAILED	DIGITAL CONVERSION DETAILED	UPDATED DETAILED	
	DATE OF EFFECTIVE ANALYSIS	7/21/2005	12/16/2009	8/1/1998	12/16/2009	11/1/1981	7/21/2005	
	HYDROLOGIC MODEL USED	HEC-1 4.1	OTHER	HEC-1 4.1	OTHER	HEC-1 4.1	HEC-1 4.1	
	HYDRAULIC MODEL USED	HEC-2	OTHER	HEC-2	OTHER	HEC-RAS	HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	YES	YES	NO	YES	YES	YES	
	IS MODEL IN HADIGITAL FORMAT?	YES	YES	NO	YES	YES	YES	
	CAN HODIGITAL MODEL BE RUN	YES	YES	NO	YES	YES	YES	
	CAN HADIGITAL MODEL BE RUN	YES	YES	NO	YES	YES	YES	
Has there been a major change in gage record since effective analysis?		NO	NO	NO	NO	NO	NO	
Is there a significant increase in Period of Record?		NO	NO	NO	NO	NO	NO	
Is the Model Methodology no longer appropriate ?		NO	NO	NO	NO	NO	NO	
Has there been an addition or removal of a major flood control structure ?		NO	NO	NO	NO	NO	NO	
Is the current Channel outside of SFHA?		NO	NO	NO	NO	NO	NO	
Has there been more than 5 new or removed structures that impact a BFE ?		NO	NO	NO	NO	YES	NO	
Has the channel area changed due to significant fill or scour ?		NO	NO	NO	NO	NO	NO	
Does this study use rural regression in urbanized areas?		NO	NO	NO	NO	NO	NO	
Are there Repetitive losses outside SFHA?		NO	NO	NO	NO	NO	NO	
Has impervious areas in sub-basin increased > 50% ?		NO	NO	NO	NO	NO	NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO	NO	NO	NO	YES	NO	
Has there been channel improvements?		NO	NO	NO	NO	NO	NO	
Is there the availability of better topography/bathymetry?		NO	NO	NO	NO	NO	NO	
Has there been changes to land use or vegetation?		NO	NO	NO	NO	NO	NO	
Have there been significant storms with HWM's?		NO	NO	NO	NO	NO	NO	
Are new Regression equations available?		NO	NO	NO	NO	NO	NO	
	CE TOTAL	0	0	0	0	1	0	
	SE TOTAL	0	0	0	0	1	0	
	COMMENT	Bulk Validated - LOMR 04-09-1534P	Bulk Validated - LOMR 09-09-0999P		Bulk Validated - LOMR 09-09-0999P		Bulk Validated - LOMR 04-09-1534P	

Reno6





0 1,300 2,600 5,200 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Reno6 CNMS Streams

Zone & Date of Effective Analysis

- AE, 11/1/1981

High Hazard Flooding Areas

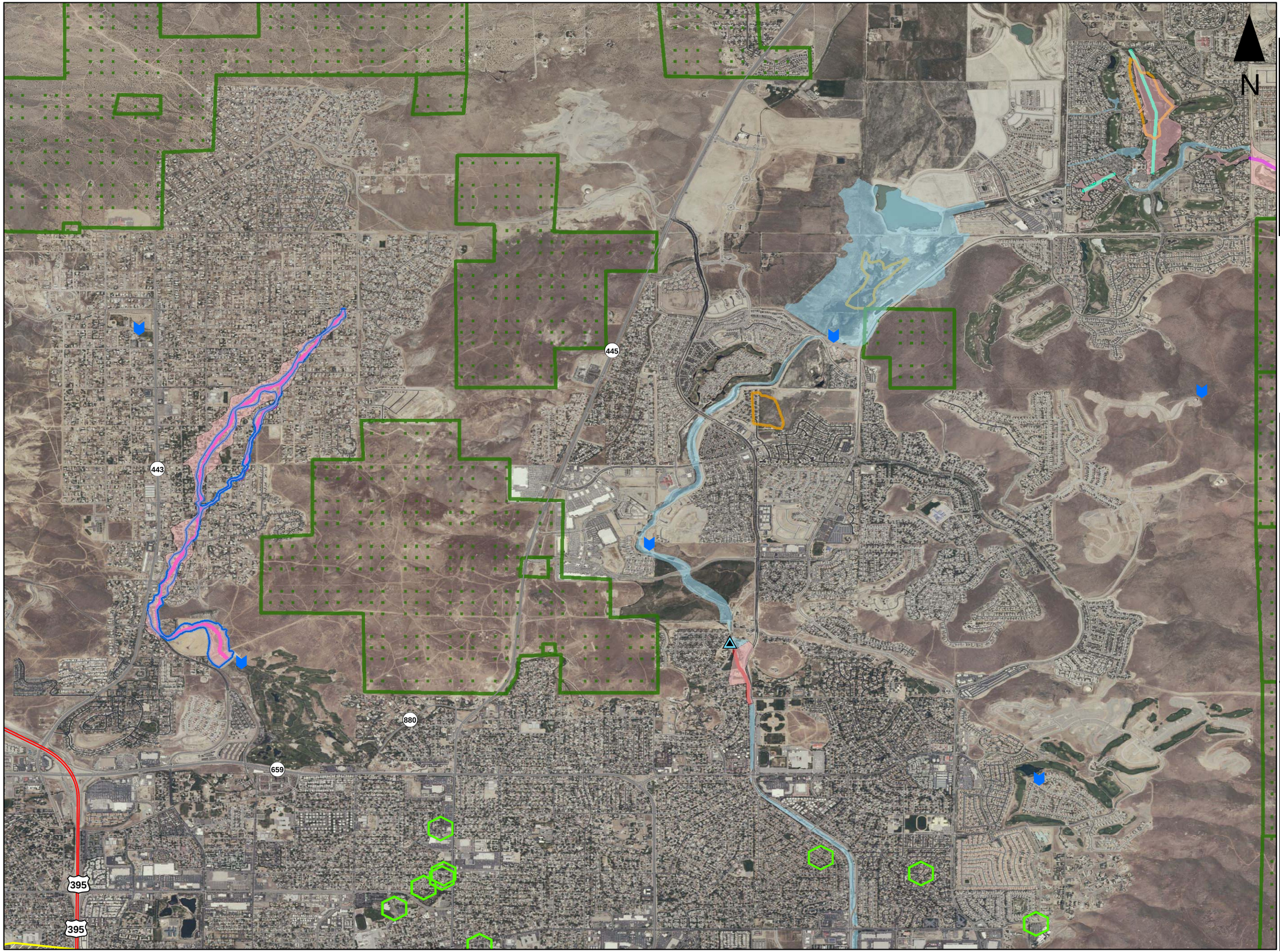
- Zone A (Approx)
- Detailed Studies
- Floodways

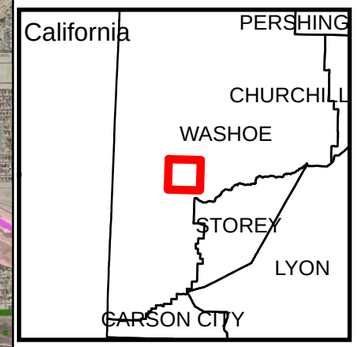
Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information			
	WATER NAME	**Golden Valley Wash**	
	FLOOD ZONE	AE	
	VALIDATION STATUS	UNVERIFIED	INVALID
	STATUS TYPE	TO BE STUDIED	
	STATUS DATE	1/31/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	11/1/1981	
	HYDROLOGIC MODEL USED	HEC-1 4.1	
	HYDRAULIC MODEL USED	HEC-RAS	
	IS MODEL IN HODIGITAL FORMAT?	YES	
	IS MODEL IN HADIGITAL FORMAT?	YES	
	CAN HODIGITAL MODEL BE RUN	YES	
	CAN HADIGITAL MODEL BE RUN	YES	
Has there been a major change in gage record since effective analysis?		NO	
Is there a significant increase in Period of Record?		NO	
Is the Model Methodology no longer appropriate ?		NO	
Has there been an addition or removal of a major flood control structure ?		NO	
Is the current Channel outside of SFHA?		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		YES	
Has the channel area changed due to significant fill or scour ?		NO	
Does this study use rural regression in urbanized areas?		NO	
Are there Repetitive losses outside SFHA?		NO	
Has impervious areas in sub-basin increased > 50% ?		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		YES	
Has there been channel improvements?		NO	
Is there the availability of better topography/bathymetry?		NO	
Has there been changes to land use or vegetation?		NO	
Have there been significant storms with HWM's?		NO	
Are new Regression equations available?		NO	
	CE TOTAL	1	
	SE TOTAL	1	
	COMMENT		

Reno7





0 1,300 2,600 5,200 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Reno7 CNMS Streams

Zones & Date of Effective Analysis

- AE, 11/1/1981
- AE, 8/1/1998
- AH, 12/1/1987
- AO, 12/1/1987

High Hazard Flooding Areas

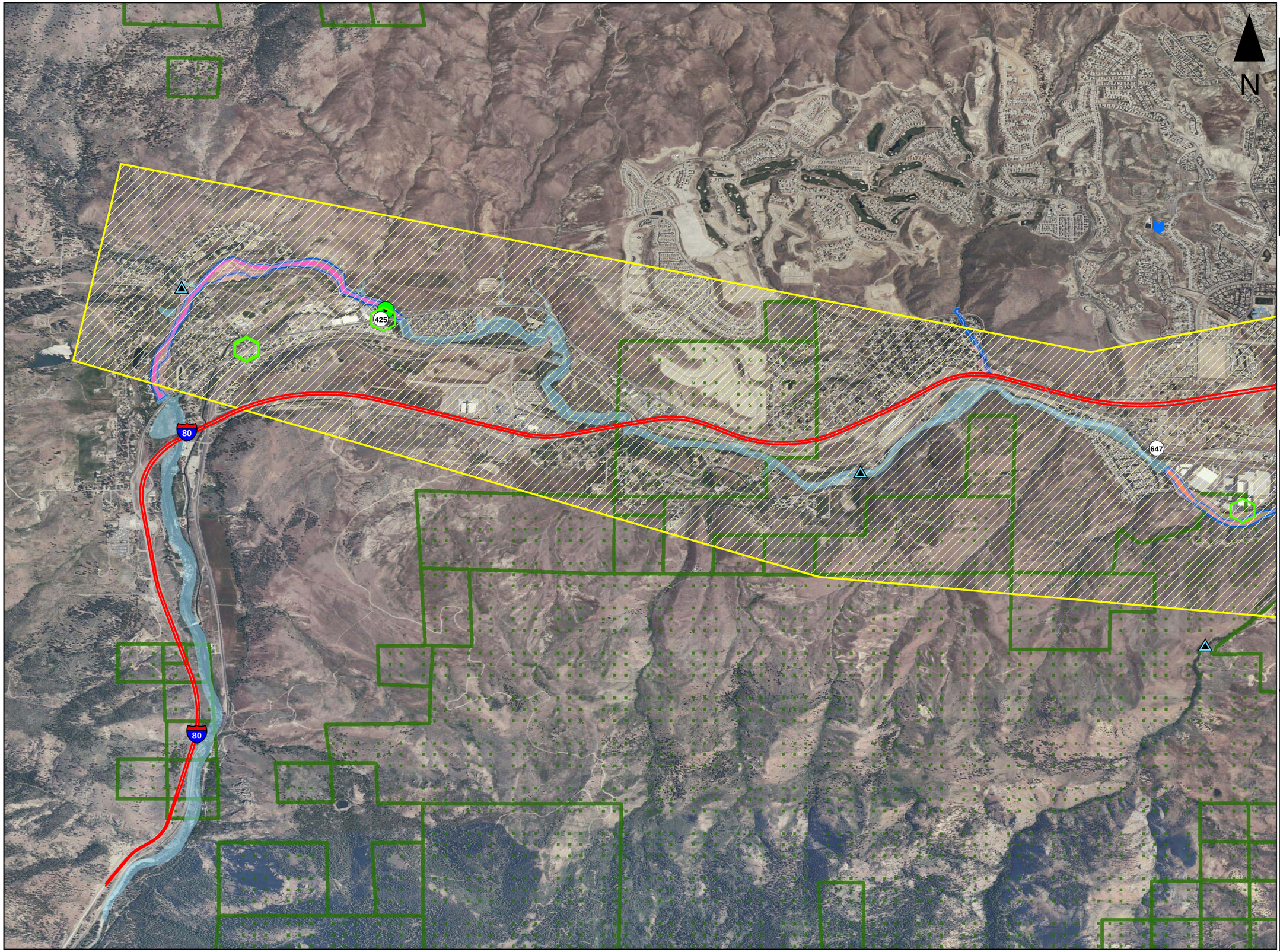
- Zone A (Approx)
- Detailed Studies
- Floodways

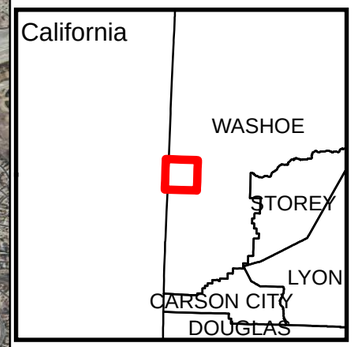
Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	Sun Valley Wash		Sun Valley Wash Split Flow		North Truckee Drain		Lake L (Spanish Springs Valley detention basins)	AH Ponding Area 2 (Spanish Springs Valley detention basins)	AO Ponding Area 1 (Spanish Springs Valley detention basins)
	FLOOD ZONE	AE		AE		AE		AH	AH	AO
	VALIDATION STATUS	UNVERIFIED	INVALID	UNVERIFIED	INVALID	UNVERIFIED	INVALID	VALID	VALID	VALID
	STATUS TYPE	TO BE STUDIED		TO BE STUDIED		TO BE STUDIED		NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT
	STATUS DATE	1/31/2011		1/31/2011		1/31/2011		1/31/2011	1/31/2011	1/31/2011
	STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED
	DATE OF EFFECTIVE ANALYSIS	11/1/1981		11/1/1981		8/1/1998		12/1/1987	12/1/1987	12/1/1987
	HYDROLOGIC MODEL USED	HEC-1 4.1		HEC-1 4.1		HEC-1 4.1		HEC-1 4.1	HEC-1 4.1	HEC-1 4.1
	HYDRAULIC MODEL USED	HEC-RAS		HEC-RAS		HEC-2		HEC-2	HEC-2	HEC-2
	IS MODEL IN HODIGITAL FORMAT?	YES		NO		NO		YES	YES	YES
	IS MODEL IN HADIGITAL FORMAT?	YES		NO		NO		YES	YES	YES
	CAN HODIGITAL MODEL BE RUN	YES		NO		NO		YES	YES	YES
	CAN HADIGITAL MODEL BE RUN	YES		NO		NO		YES	YES	YES
Has there been a major change in gage record since effective analysis?		NO		NO		NO		NO	NO	NO
Is there a significant increase in Period of Record?		NO		NO		YES		NO	NO	NO
Is the Model Methodology no longer appropriate ?		NO		NO		NO		NO	NO	NO
Has there been an addition or removal of a major flood control structure ?		NO		NO		NO		NO	NO	NO
Is the current Channel outside of SFHA?		YES		NO		NO		NO	NO	NO
Have there been more than 5 new or removed structures that impact a BFE ?		YES		YES		NO		NO	NO	NO
Has the channel area changed due to significant fill or scour ?		NO		NO		NO		NO	NO	NO
Does this study use rural regression in urbanized areas?		YES		YES		YES		YES	YES	YES
Are there Repetitive losses outside SFHA?		NO		NO		NO		NO	NO	NO
Has impervious areas in sub-basin increased > 50% ?		YES		YES		YES		YES	YES	YES
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO		NO		YES		NO	NO	NO
Has there been channel improvements?		YES		NO		YES		NO	NO	NO
Is there the availability of better topography/bathymetry?		NO		NO		NO		NO	NO	NO
Has there been changes to land use or vegetation?		NO		NO		NO		NO	NO	NO
Have there been significant storms with HWM's?		NO		NO		NO		NO	NO	NO
Are new Regression equations available?		NO		NO		NO		NO	NO	NO
	CE TOTAL	2		1		1		0	0	0
	SE TOTAL	3		2		4		2	2	2
	COMMENT									

Reno8





0 1,300 2,600 5,200 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Reno8 CNMS Streams

Zones & Date of Effective Analysis

- AE, 11/1/1981
- AE, 5/1/1996
- AE, 7/28/2007

High Hazard Flooding Areas

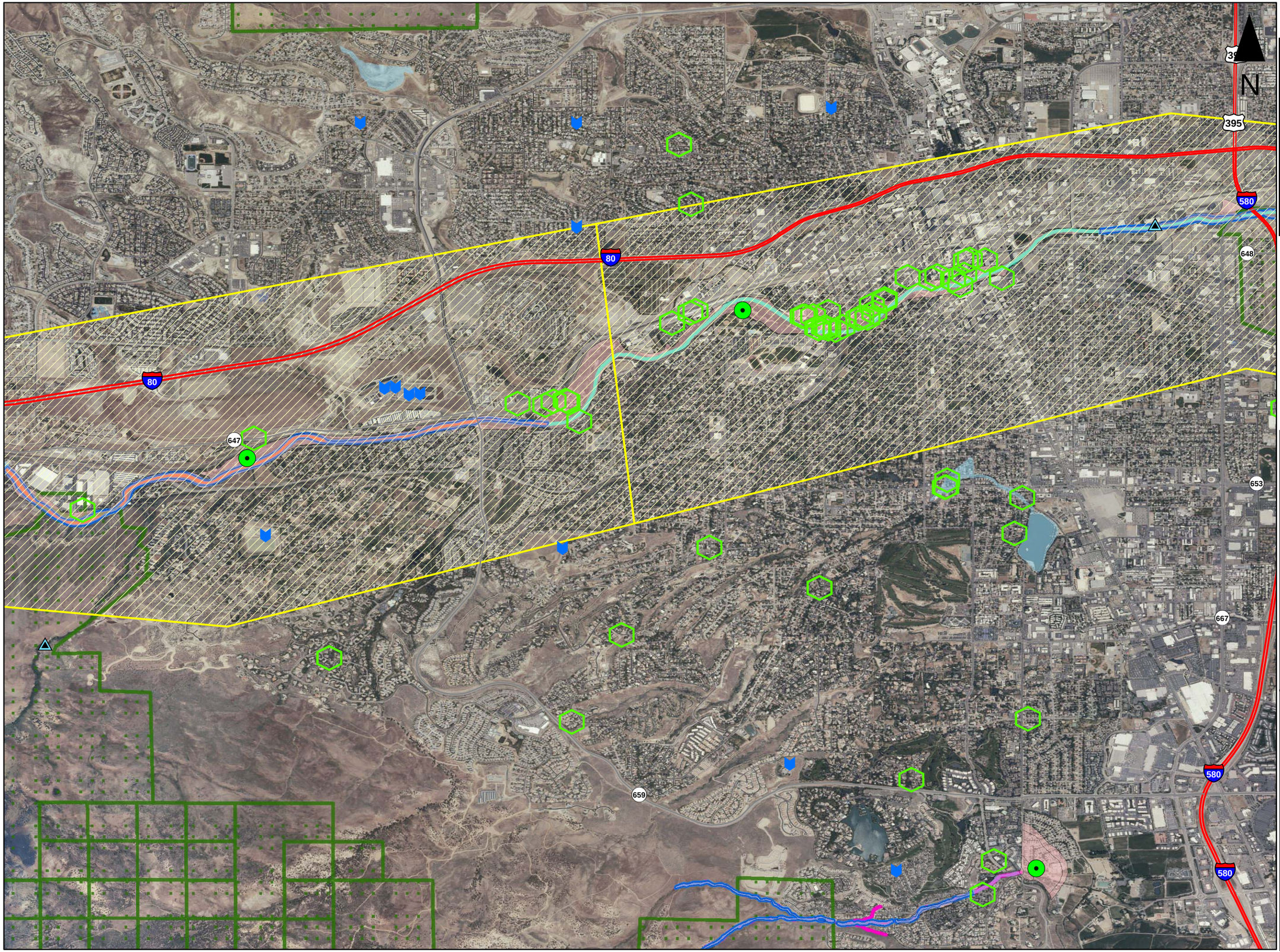
- Zone A (Approx)
- Detailed Studies
- Floodways

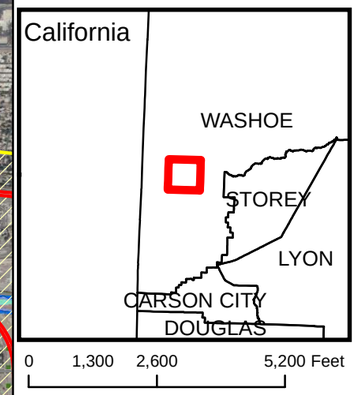
Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information						
WATER NAME	**Mogul Creek**		**Truckee River**		**Truckee River**	
FLOOD ZONE	AE		AE		AE	
VALIDATION STATUS	VALID		UNVERIFIED	INVALID	VALID	
STATUS TYPE	NVUE COMPLIANT		TO BE STUDIED		NVUE COMPLIANT	
STATUS DATE	1/31/2011		1/31/2011		1/31/2011	
STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED		UPDATED DETAILED	
DATE OF EFFECTIVE ANALYSIS	5/1/1996		11/1/1981		7/28/2007	
HYDROLOGIC MODEL USED	GAGE ANALYSIS		OTHER		OTHER	
HYDRAULIC MODEL USED	WSPRO (JUNE 1988)		HEC-2		HEC-2	
IS MODEL IN HODIGITAL FORMAT?	NO		YES		YES	
IS MODEL IN HADIGITAL FORMAT?	NO		YES		YES	
CAN HODIGITAL MODEL BE RUN	NO		YES		YES	
CAN HADIGITAL MODEL BE RUN	NO		YES		YES	
Has there been a major change in gage record since effective analysis?	NO		NO		NO	
Is there a significant increase in Period of Record?	NO		NO		NO	
Is the Model Methodology no longer appropriate ?	NO		NO		NO	
Has there been an addition or removal of a major flood control structure ?	NO		NO		NO	
Is the current Channel outside of SFHA?	NO		NO		NO	
Have there been more than 5 new or removed structures that impact a BFE ?	NO		YES		NO	
Has the channel area changed due to significant fill or scour ?	NO		UNKNOWN		NO	
Does this study use rural regression in urbanized areas?	YES		YES		NO	
Are there Repetitive losses outside SFHA?	NO		NO		NO	
Has impervious areas in sub-basin increased > 50% ?	YES		YES		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?	NO		NO		NO	
Has there been channel improvements?	YES		NO		NO	
Is there the availability of better topography/bathymetry?	NO	YES-LIDAR, Truckee River Project	NO	YES-LIDAR, Truckee River Project	NO	YES-LIDAR, Truckee River Project
Has there been changes to land use or vegetation?	NO		NO		NO	
Have there been significant storms with HWM's?	NO		NO		NO	
Are new Regression equations available?	NO		NO		NO	
CE TOTAL	0		1		0	
SE TOTAL	3		2		0	
COMMENT			C7 scour suspected, Hydro_Mdl = Rain Flood Prob. Curve		Bulk Validated - LOMR 06-09-BG15P, Hydro_Mdl = Rain Flood Prob. Curve	

Reno9





Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Reno9 CNMS Streams

Zones & Date of Effective Analysis

- AE, 11/1/1981
- AE, 6/8/2013
- AE, 8/1/1998

High Hazard Flooding Areas

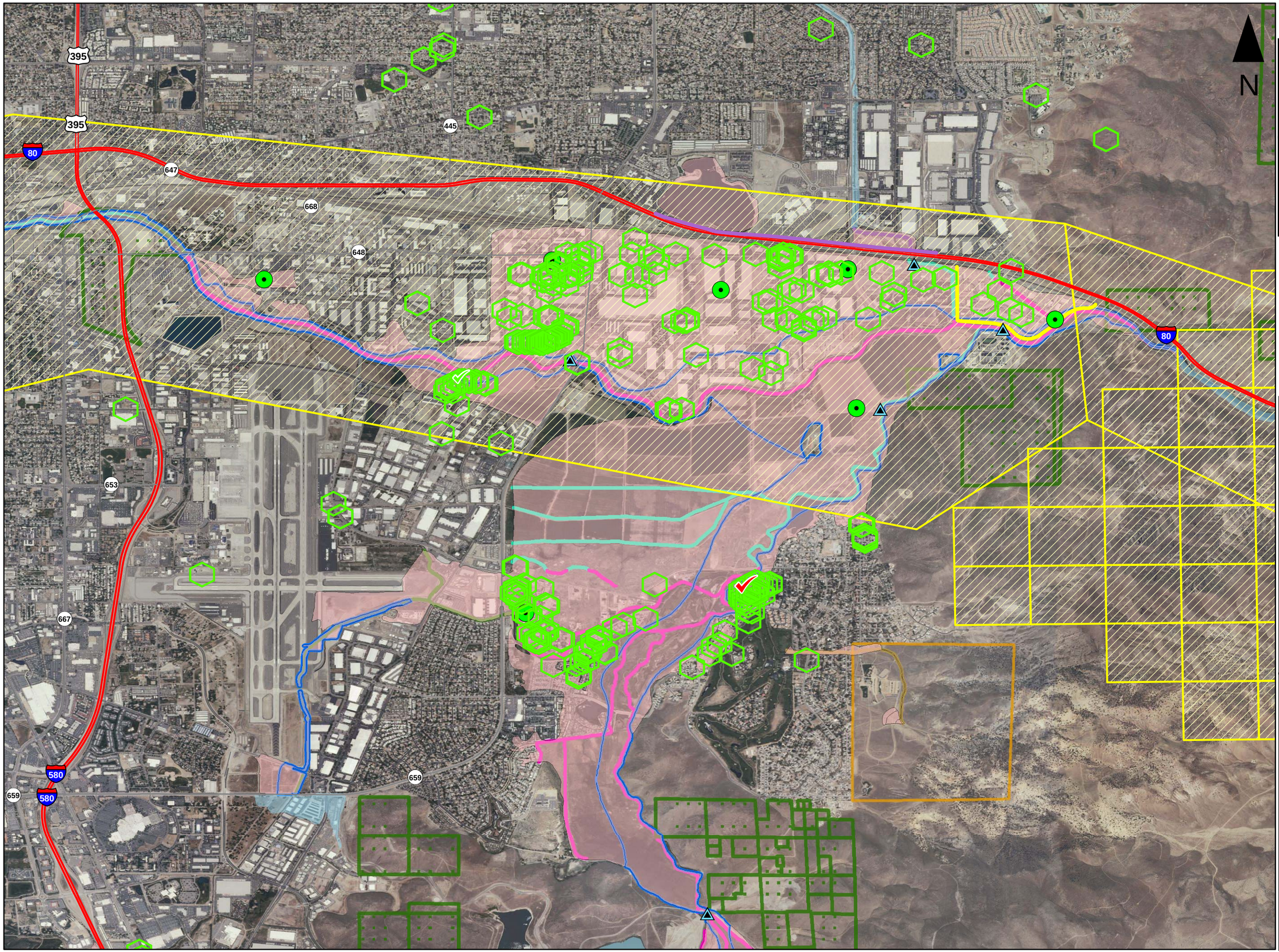
- Zone A (Approx)
- Detailed Studies
- Floodways

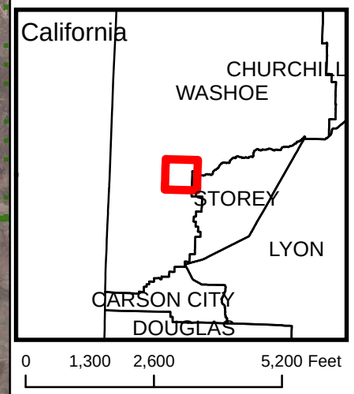
Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	Truckee River		Truckee River		Evans Creek		Lake Ditch		NORTH EVANS CREEK	
	FLOOD ZONE	AE		AE		AE		AE		AE	
	VALIDATION STATUS	UNVERIFIED	INVALID	UNVERIFIED	INVALID	UNVERIFIED		UNVERIFIED		UNVERIFIED	
	STATUS TYPE	TO BE STUDIED		TO BE STUDIED		BEING STUDIED		BEING STUDIED		BEING STUDIED	
	STATUS DATE	1/31/2011		1/31/2011		7/31/2012		7/31/2012		7/31/2012	
	STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED		NEW DETAILED		NEW DETAILED		NEW DETAILED	
	DATE OF EFFECTIVE ANALYSIS	11/1/1981		8/1/1998		6/8/2013		6/8/2013		6/8/2013	
	HYDROLOGIC MODEL USED	OTHER		GAGE ANALYSIS		HEC-HMS		HEC-HMS		HEC-HMS	
	HYDRAULIC MODEL USED	HEC-2		HEC-2		HEC-RAS		HEC-RAS		HEC-RAS	
	IS MODEL IN HODIGITAL FORMAT?	YES		YES		YES		YES		YES	
	IS MODEL IN HADIGITAL FORMAT?	YES		YES		YES		YES		YES	
	CAN HODIGITAL MODEL BE RUN	YES		YES		YES		YES		YES	
	CAN HADIGITAL MODEL BE RUN	YES		YES		YES		YES		YES	
Has there been a major change in gage record since effective analysis?		NO		NO	gage on reach	NO		NO		NO	
Is there a significant increase in Period of Record?		NO		NO		NO		NO		NO	
Is the Model Methodology no longer appropriate ?		NO		NO		NO		NO		NO	
Has there been an addition or removal of a major flood control structure ?		NO		NO		NO		NO		NO	
Is the current Channel outside of SFHA?		NO		NO		NO		NO		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		YES		NO		NO		NO		NO	
Has the channel area changed due to significant fill or scour ?		UNKNOWN		UNKNOWN		NO		NO		NO	
Does this study use rural regression in urbanized areas?		YES		YES		NO		NO		NO	
Are there Repetitive losses outside SFHA?		NO		NO		NO		NO		NO	
Has impervious areas in sub-basin increased > 50% ?		YES		YES		NO		NO		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO		YES		NO		NO		NO	
Has there been channel improvements?		NO		NO		NO		NO		NO	
Is there the availability of better topography/bathymetry?		NO	YES- LIDAR, Truckee River Project	NO	YES- LIDAR, Truckee River Project	NO		NO		NO	
Has there been changes to land use or vegetation?		NO		NO		NO		NO		NO	
Have there been significant storms with HWM's?		NO		NO		NO		NO		NO	
Are new Regression equations available?		NO		NO		NO		NO		NO	
	CE TOTAL	1		0		0		0		0	
	SE TOTAL	2		3		0		0		0	
	COMMENT	C7 scour suspected, Hydro_Mdl = Rain Flood Prob. Curve		C7 scour suspected		Hydra model = HEC-RAS 4.1		Hydra model = HEC-RAS 4.1		Hydra model = HEC-RAS 4.1	

Reno10





0 1,300 2,600 5,200 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Reno10 CNMS Streams

Zones & Date of Effective Analysis

- AE, 11/1/1981
- AE, 12/1/1987
- AE, 6/1/1991
- AE, 7/21/2005
- AE, 8/1/1998

High Hazard Flooding Areas

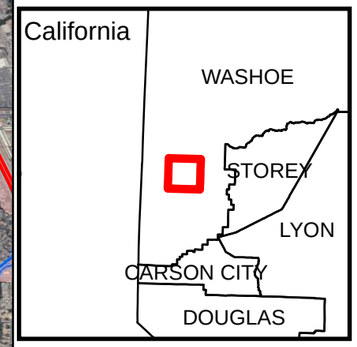
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information														
	WATER NAME	**Boynton Slough**		**Steamboat Creek**		**Hidden Valley Wash**		**North Truckee Drain**		**North Truckee Drain**		**Truckee River**	**Steamboat Creek**	
	FLOOD ZONE	AE		AE		AE		AE		AE		AE	AE	
	VALIDATION STATUS	UNVERIFIED	INVALID	UNVERIFIED	INVALID	UNVERIFIED	INVALID	UNVERIFIED	INVALID	VALID	INVALID	VALID	UNVERIFIED	INVALID
	STATUS TYPE	TO BE STUDIED		TO BE STUDIED		TO BE STUDIED		TO BE STUDIED		NVUE COMPLIANT		NVUE COMPLIANT	TO BE STUDIED	
	STATUS DATE	1/31/2011		1/31/2011		1/31/2011		1/31/2011		1/31/2011		1/31/2011	1/31/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED		UPDATED DETAILED		DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	6/1/1991		8/1/1998		11/1/1981		8/1/1998		7/21/2005		12/1/1987	12/1/1987	
	HYDROLOGIC MODEL USED	GAGE ANALYSIS		GAGE ANALYSIS		HEC-1 4.1		HEC-1 4.1		HEC-1 4.1		GAGE ANALYSIS	GAGE ANALYSIS	
	HYDRAULIC MODEL USED	HEC-2		HEC-2		HEC-RAS		HEC-2		HEC-2		HEC-2	HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	YES		YES		YES		NO		YES		YES	YES	
	IS MODEL IN HADIGITAL FORMAT?	YES		YES		YES		NO		YES		YES	YES	
	CAN HODIGITAL MODEL BE RUN	YES		YES		YES		NO		YES		YES	YES	
	CAN HADIGITAL MODEL BE RUN	YES		YES		YES		NO		YES		YES	YES	
	Has there been a major change in gage record since effective analysis?	NO	Gage on reach. Poss higher peak flow since hydro analysis	NO	Gage on reach. Poss higher peak flow since hydro analysis	NO		NO		NO		NO	NO	Gage on stream. Poss higher peak flow since hydro analysis
	Is there a significant increase in Period of Record?	NO	Possible	YES	Possible	NO		YES		NO		NO	YES	Possible
	Is the Model Methodology no longer appropriate ?	NO		NO		NO		NO		NO		NO	NO	
	Has there been an addition or removal of a major flood control structure ?	NO		NO		NO		NO		NO		NO	NO	
	Is the current Channel outside of SFHA?	YES		NO		NO		NO		NO		NO	NO	
	Have there been more than 5 new or removed structures that impact a BFE ?	NO		NO		YES		NO		NO		NO	NO	
	Has the channel area changed due to significant fill or scour ?	UNKNOWN		NO		NO		NO		NO		NO	NO	
	Does this study use rural regression in urbanized areas?	YES		YES		NO		YES		NO		YES	YES	
	Are there Repetitive losses outside SFHA?	NO		NO		NO		NO		NO		NO	NO	
	Has impervious areas in sub-basin increased > 50% ?	YES		YES		YES		YES		NO		YES	YES	
	Has > 1 and < 5 structures been added or removed that impact a BFE?	YES		YES		NO		YES		NO		NO	YES	
	Has there been channel improvements?	YES		NO		NO		YES		NO		NO	YES	
	Is there the availability of better topography/bathymetry?	NO		NO	YES- LIDAR, Truckee Rvr Project	NO		NO		NO		NO	NO	
	Has there been changes to land use or vegetation?	NO		NO		NO		NO		NO		NO	NO	
	Have there been significant storms with HWM's?	NO		NO		NO		NO		NO		NO	NO	
	Are new Regression equations available?	NO		NO		NO		NO		NO		NO	NO	
	CE TOTAL	1		1		1		1		0		0	1	
	SE TOTAL	4		3		1		4		0		2	4	
	COMMENT	C7 scour suspected								Bulk Validated - LOMR 05-09-0144P				

Reno11



0 1,300 2,600 5,200 Feet

N

580

580

671

431

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Reno11 CNMS Streams

Zones & Date of Effective Analysis

- AE, 10/6/2005
- AE, 6/1/1991
- AE, 6/8/2013

High Hazard Flooding Areas

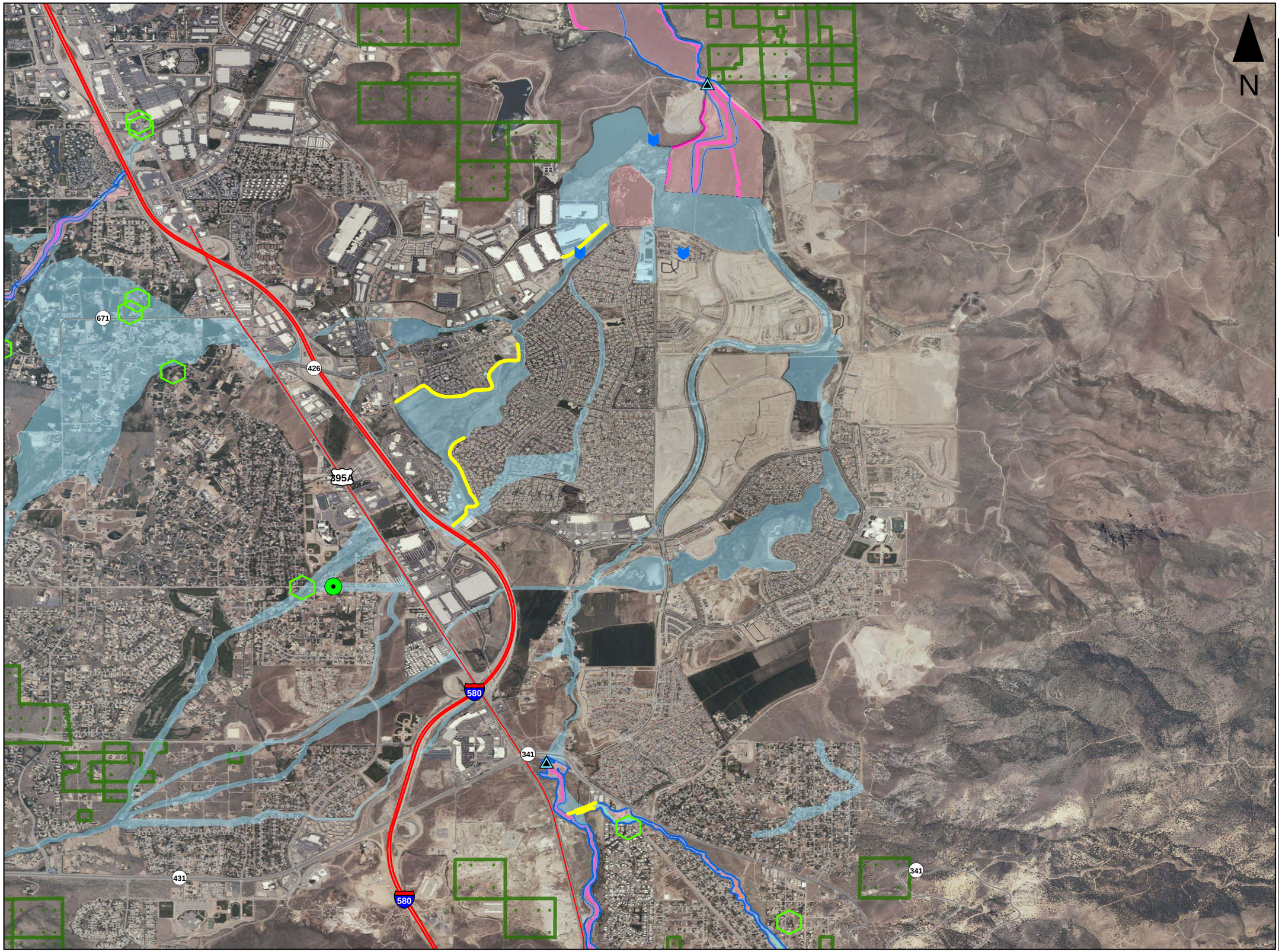
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	Evans Creek		Dry Creek		Lake Ditch		Dry Creek		NORTH EVANS CREEK	
	FLOOD ZONE	AE		AE		AE		AE		AE	
	VALIDATION STATUS	UNVERIFIED		VALID		UNVERIFIED		VALID		UNVERIFIED	
	STATUS TYPE	BEING STUDIED		NVUE COMPLIANT		BEING STUDIED		NVUE COMPLIANT		BEING STUDIED	
	STATUS DATE	7/31/2012		1/31/2011		7/31/2012		1/31/2011		7/31/2012	
	STUDY TYPE	NEW DETAILED		DIGITAL CONVERSION DETAILED		NEW DETAILED		UPDATED DETAILED		NEW DETAILED	
	DATE OF EFFECTIVE ANALYSIS	6/8/2013		6/1/1991		6/8/2013		10/6/2005		6/8/2013	
	HYDROLOGIC MODEL USED	HEC-HMS		GAGE ANALYSIS	Gage Analysis used, but no gage found on map	HEC-HMS		HEC-1 4.1		HEC-HMS	
	HYDRAULIC MODEL USED	HEC-RAS		HEC-2		HEC-RAS		OTHER		HEC-RAS	
	IS MODEL IN HODIGITAL FORMAT?	YES		YES		YES		YES		YES	
	IS MODEL IN HADIGITAL FORMAT?	YES		YES		YES		YES		YES	
	CAN HODIGITAL MODEL BE RUN	YES		YES		YES		YES		YES	
	CAN HADIGITAL MODEL BE RUN	YES		YES		YES		YES		YES	
Has there been a major change in gage record since effective analysis?		NO		NO		NO		NO		NO	
Is there a significant increase in Period of Record?		NO		NO		NO		NO		NO	
Is the Model Methodology no longer appropriate ?		NO		NO		NO		NO		NO	
Has there been an addition or removal of a major flood control structure ?		NO		NO		NO		NO		NO	
Is the current Channel outside of SFHA?		NO		NO		NO		NO		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO		NO		NO		NO		NO	
Has the channel area changed due to significant fill or scour ?		NO		NO		NO		NO		NO	
Does this study use rural regression in urbanized areas?		NO		YES		NO		NO		NO	
Are there Repetitive losses outside SFHA?		NO		NO		NO		NO		NO	
Has impervious areas in sub-basin increased > 50% ?		NO		YES		NO		NO		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO		NO		NO		NO		NO	
Has there been channel improvements?		NO		NO		NO		NO		NO	
Is there the availability of better topography/bathymetry?		NO		NO		NO		NO		NO	
Has there been changes to land use or vegetation?		NO		NO		NO		NO		NO	
Have there been significant storms with HWM's?		NO		NO		NO		NO		NO	
Are new Regression equations available?		NO		NO		NO		NO		NO	
	CE TOTAL	0		0		0		0		0	
	SE TOTAL	0		2		0		0		0	
	COMMENT	Hydra model = HEC-RAS 4.1				Hydra model = HEC-RAS 4.1		Bulk Validated - LOMR 05-09-0188P; Hydra_Mdl = Alluvial Fan Analysis		Hydra model = HEC-RAS 4.1	

Reno12



0 1,300 2,600 5,200 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Reno12 CNMS Streams

Zones & Date of Effective Analysis

- AE, 10/6/2005
- AE, 11/1/2001
- AE, 12/1/1987
- AE, 6/1/1991
- AE, 8/1/1998

High Hazard Flooding Areas

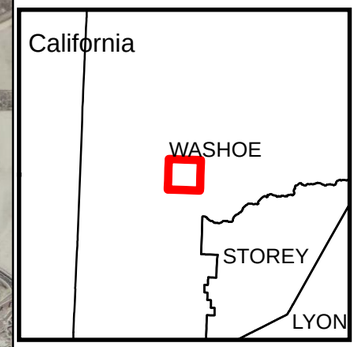
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	Steamboat Creek		Dry Creek		Bailey Canyon Creek		Bailey Canyon Creek		Dry Creek	
	FLOOD ZONE	AE		AE		AE		AE		AE	
	VALIDATION STATUS	UNVERIFIED	INVALID	VALID		UNVERIFIED	INVALID	VALID		VALID	
	STATUS TYPE	TO BE STUDIED		NVUE COMPLIANT		TO BE STUDIED		NVUE COMPLIANT		NVUE COMPLIANT	
	STATUS DATE	1/31/2011		1/31/2011		1/31/2011		1/31/2011		1/31/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED		UPDATED DETAILED		UPDATED DETAILED	
	DATE OF EFFECTIVE ANALYSIS	12/1/1987		6/1/1991		8/1/1998		11/1/2001		10/6/2005	
	HYDROLOGIC MODEL USED	GAGE ANALYSIS		GAGE ANALYSIS		GAGE ANALYSIS		GAGE ANALYSIS		HEC-1 4.1	Alluvial Fan Analysis
	HYDRAULIC MODEL USED	HEC-2		HEC-2		HEC-2		HEC-2		OTHER	
	IS MODEL IN HODIGITAL FORMAT?	YES		YES		NO		YES		YES	
	IS MODEL IN HADIGITAL FORMAT?	YES		YES		NO		YES		YES	
	CAN HODIGITAL MODEL BE RUN	YES		YES		NO		YES		YES	
	CAN HADIGITAL MODEL BE RUN	YES		YES		NO		YES		YES	
	Has there been a major change in gage record since effective analysis?	NO	GAGE on reach. Poss higher peak flow since 1987 analysis	NO	Map does not show a gage on reach	NO	Gage on reach. Poss higher peak flow since analysis	NO	Gage on reach. Poss higher peak flow since analysis	NO	
	Is there a significant increase in Period of Record?	YES		NO		NO		NO		NO	
	Is the Model Methodology no longer appropriate ?	NO		NO		NO		NO		NO	
	Has there been an addition or removal of a major flood control structure ?	NO		NO		NO		NO		NO	
	Is the current Channel outside of SFHA?	NO		NO		YES		NO		NO	
	Have there been more than 5 new or removed structures that impact a BFE ?	NO		NO		NO		NO		NO	
	Has the channel area changed due to significant fill or scour ?	NO		NO		NO		NO		NO	
	Does this study use rural regression in urbanized areas?	YES		YES		NO		NO		NO	
	Are there Repetitive losses outside SFHA?	NO		NO		NO		NO		NO	
	Has impervious areas in sub-basin increased > 50% ?	YES		YES		YES		YES		NO	
	Has > 1 and < 5 structures been added or removed that impact a BFE?	YES		NO		YES		NO		NO	
	Has there been channel improvements?	YES		NO		NO		NO		NO	
	Is there the availability of better topography/bathymetry?	NO		NO		NO		NO		NO	
	Has there been changes to land use or vegetation?	NO		NO		NO		NO		NO	
	Have there been significant storms with HWM's?	NO		NO		NO		NO		NO	
	Are new Regression equations available?	NO		NO		NO		NO		NO	
	CE TOTAL	1		0		1		0		0	
	SE TOTAL	4		2		2		1		0	
	COMMENT							LOMR 01-09-307P		LOMR 05-09-0188P; Hydra_Mdl = Alluvial Fan Analysis	

Sparks1 21



N

443

445

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Sparks1 CNMS Streams

Zones & Date of Effective Analysis

- AE, 11/1/1981
- AE, 8/1/1998

High Hazard Flooding Areas

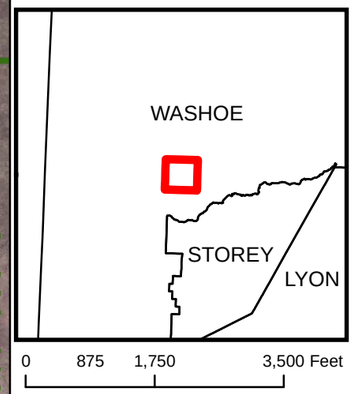
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	Sun Valley Wash		North Truckee Drain		Sun Valley Wash Split Flow	
	FLOOD ZONE	AE		AE		AE	
	VALIDATION STATUS	UNVERIFIED	INVALID	UNVERIFIED	INVALID	UNVERIFIED	INVALID
	STATUS TYPE	TO BE STUDIED		TO BE STUDIED		TO BE STUDIED	
	STATUS DATE	1/31/2011		1/31/2011		1/31/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	11/1/1981		8/1/1998		11/1/1981	
	HYDROLOGIC MODEL USED	HEC-1 4.1		HEC-1 4.1		HEC-1 4.1	
	HYDRAULIC MODEL USED	HEC-RAS		HEC-2		HEC-RAS	
	IS MODEL IN HODIGITAL FORMAT?	YES		NO		NO	
	IS MODEL IN HADIGITAL FORMAT?	YES		NO		NO	
	CAN HODIGITAL MODEL BE RUN	YES		NO		NO	
	CAN HADIGITAL MODEL BE RUN	YES		NO		NO	
Has there been a major change in gage record since effective analysis?		NO		NO		NO	
Is there a significant increase in Period of Record?		NO		YES		NO	
Is the Model Methodology no longer appropriate ?		NO		NO		NO	
Has there been an addition or removal of a major flood control structure ?		NO		NO		NO	
Is the current Channel outside of SFHA?		YES		NO		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		YES		NO		YES	
Has the channel area changed due to significant fill or scour ?		NO		NO		NO	
Does this study use rural regression in urbanized areas?		YES		YES		YES	
Are there Repetitive losses outside SFHA?		NO		NO		NO	
Has impervious areas in sub-basin increased > 50% ?		YES		YES		YES	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO		YES		NO	
Has there been channel improvements?		YES		YES		NO	
Is there the availability of better topography/bathymetry?		NO		NO		NO	
Has there been changes to land use or vegetation?		NO		NO		NO	
Have there been significant storms with HWM's?		NO		NO		NO	
Are new Regression equations available?		NO		NO		NO	
	CE TOTAL	2		1		1	
	SE TOTAL	3		4		2	
	COMMENT						

Sparks2 23



N

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Sparks2 CNMS Streams

Zones & Date of Effective Analysis

- AH, 12/1/1987
- AO, 12/1/1987

High Hazard Flooding Areas

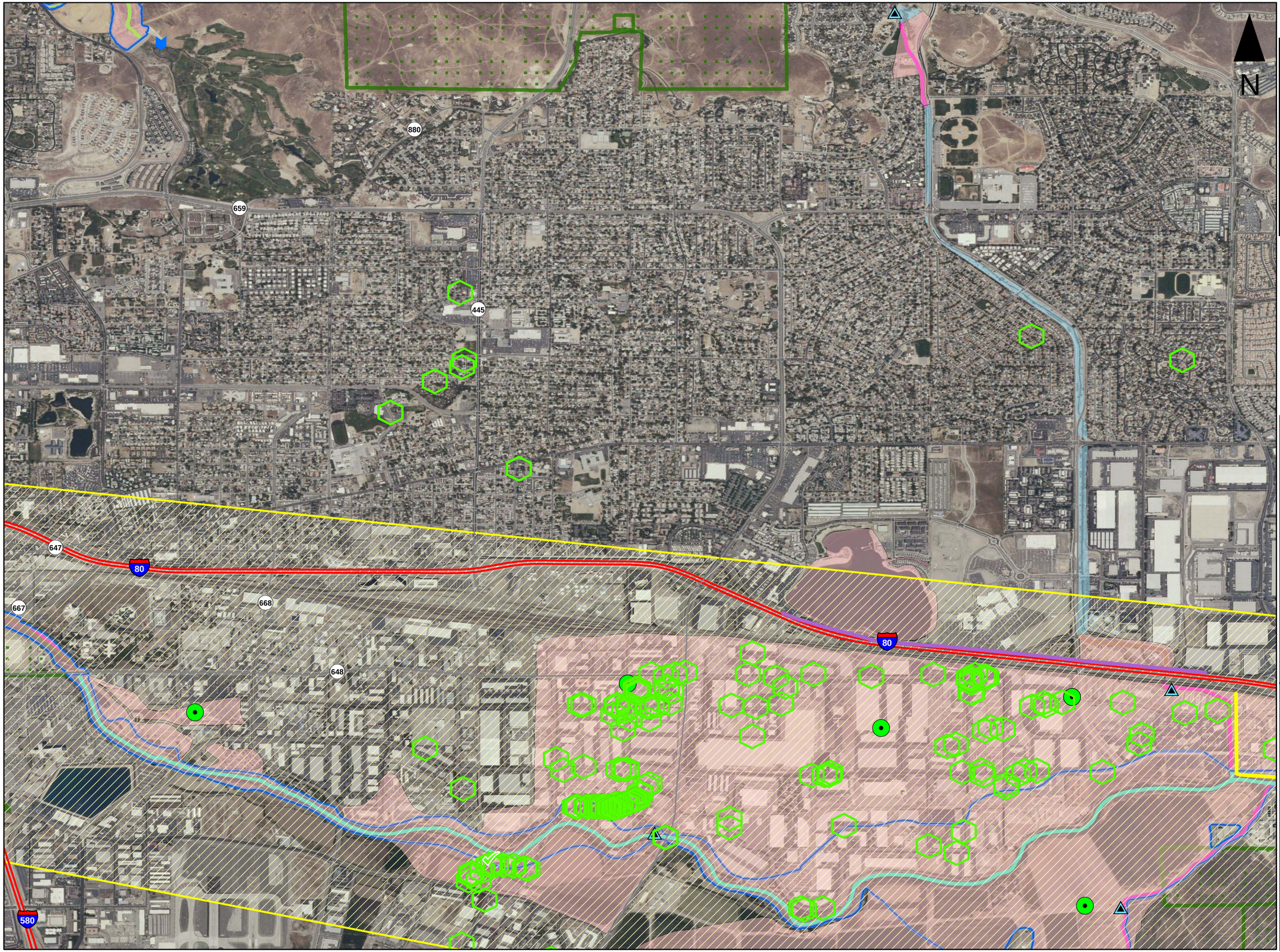
- Zone A (Approx)
- Detailed Studies
- Floodways

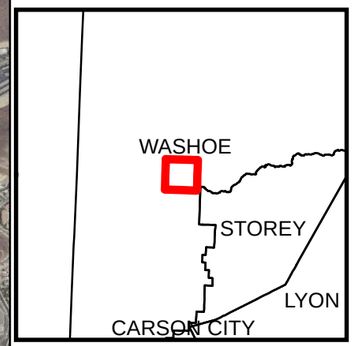
Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	AH Ponding Area 2 (Spanish Springs Valley detention basins)		Lake L (Spanish Springs Valley detention basins)		AO Ponding Area 1 (Spanish Springs Valley detention basins)
	FLOOD ZONE	AH		AH		AO
	VALIDATION STATUS	VALID		VALID		VALID
	STATUS TYPE	NVUE COMPLIANT		NVUE COMPLIANT		NVUE COMPLIANT
	STATUS DATE	1/31/2011		1/31/2011		1/31/2011
	STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED
	DATE OF EFFECTIVE ANALYSIS	12/1/1987		12/1/1987		12/1/1987
	HYDROLOGIC MODEL USED	HEC-1 4.1		HEC-1 4.1		HEC-1 4.1
	HYDRAULIC MODEL USED	HEC-2		HEC-2		HEC-2
	IS MODEL IN HODIGITAL FORMAT?	YES		YES		YES
	IS MODEL IN HADIGITAL FORMAT?	YES		YES		YES
	CAN HODIGITAL MODEL BE RUN	YES		YES		YES
	CAN HADIGITAL MODEL BE RUN	YES		YES		YES
Has there been a major change in gage record since effective analysis?		NO		NO		NO
Is there a significant increase in Period of Record?		NO		NO		NO
Is the Model Methodology no longer appropriate ?		NO		NO		NO
Has there been an addition or removal of a major flood control structure ?		NO		NO		NO
Is the current Channel outside of SFHA?		NO		NO		NO
Have there been more than 5 new or removed structures that impact a BFE ?		NO		NO		NO
Has the channel area changed due to significant fill or scour ?		NO		NO		NO
Does this study use rural regression in urbanized areas?		YES		YES		YES
Are there Repetitive losses outside SFHA?		NO		NO		NO
Has impervious areas in sub-basin increased > 50% ?		YES		YES		YES
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO		NO		NO
Has there been channel improvements?		NO		NO		NO
Is there the availability of better topography/bathymetry?		NO		NO		NO
Has there been changes to land use or vegetation?		NO		NO		NO
Have there been significant storms with HWM's?		NO		NO		NO
Are new Regression equations available?		NO		NO		NO
	CE TOTAL	0		0		0
	SE TOTAL	2		2		2
	COMMENT					

Sparks3 25





0 850 1,700 3,400 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Sparks3 CNMS Streams

Zones & Date of Effective Analysis

- AE, 11/1/1981
- AE, 12/1/1987
- AE, 7/21/2005
- AE, 8/1/1998

High Hazard Flooding Areas

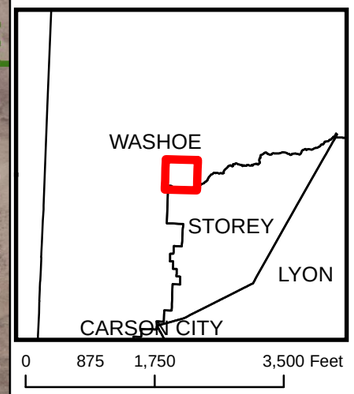
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	Steamboat Creek		Truckee River		Truckee River		North Truckee Drain		Truckee Drain		Sun Valley Wash	
	FLOOD ZONE	AE		AE		AE		AE		AE		AE	
	VALIDATION STATUS	UNVERIFIED		VALID		UNVERIFIED		UNVERIFIED	INVALID	VALID	INVALID	UNVERIFIED	INVALID
	STATUS TYPE	TO BE STUDIED		NVUE COMPLIANT		TO BE STUDIED		TO BE STUDIED		NVUE COMPLIANT		TO BE STUDIED	
	STATUS DATE	1/31/2011		1/31/2011		1/31/2011		1/31/2011		1/31/2011		1/31/2011	
	STUDY TYPE	CONVERSION DETAILED		CONVERSION DETAILED		CONVERSION DETAILED		CONVERSION DETAILED		UPDATED DETAILED		CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	8/1/1998		12/1/1987		8/1/1998		8/1/1998		7/21/2005		11/1/1981	
	HYDROLOGIC MODEL USED	GAGE ANALYSIS		GAGE ANALYSIS		GAGE ANALYSIS		HEC-1 4.1		HEC-1 4.1		HEC-1 4.1	
	HYDRAULIC MODEL USED	HEC-2		HEC-2		HEC-2		HEC-2		HEC-2		HEC-RAS	
	IS MODEL IN HODIGITAL FORMAT?	YES		YES		YES		NO		YES		YES	
	IS MODEL IN HADIGITAL FORMAT?	YES		YES		YES		NO		YES		YES	
	CAN HODIGITAL MODEL BE RUN	YES		YES		YES		NO		YES		YES	
	CAN HADIGITAL MODEL BE RUN	YES		YES		YES		NO		YES		YES	
	Has there been a major change in gage record since effective analysis?	NO	YES-Gage on reach & poss peak flow occurred after analysis date	NO	YES-Gage on reach & peak flow occurred after analysis date	NO	YES-Gage on reach & peak flow occurred after analysis date	NO		NO		NO	
	Is there a significant increase in Period of Record?	YES	YES-possibly	NO	YES	NO	YES	YES		NO		NO	
	Is the Model Methodology no longer appropriate ?	NO		NO		NO		NO		NO		NO	
	Has there been an addition or removal of a major flood control structure ?	NO		NO		NO		NO		NO		NO	
	Is the current Channel outside of SFHA?	NO		NO		NO		NO		NO		YES	
	Have there been more than 5 new or removed structures that impact a BFE ?	NO		NO		NO		NO		NO		YES	
	Has the channel area changed due to significant fill or scour ?	NO		NO		12		NO		NO		NO	
	Does this study use rural regression in urbanized areas?	YES		YES		YES		YES		NO		YES	
	Are there Repetitive losses outside SFHA?	NO		NO		NO		NO		NO		NO	
	Has impervious areas in sub-basin increased > 50% ?	YES		YES		YES		YES		NO		YES	
	Has > 1 and < 5 structures been added or removed that impact a BFE?	YES		NO		YES		YES		NO		NO	
	Has there been channel improvements?	NO		NO		NO		YES		NO		YES	
	Is there the availability of better topography/bathymetry?	NO	YES-LIDAR Truckee R Project	NO	YES-LIDAR Truckee R Project	NO	YES-LIDAR Truckee R Project	NO		NO	Truckee R Project	NO	
	Has there been changes to land use or vegetation?	NO		NO		NO		NO		NO		NO	
	Have there been significant storms with HWM's?	NO		NO		NO		NO		NO		NO	
	Are new Regression equations available?	NO		NO		NO		NO		NO		NO	
	CE TOTAL	1		0		0		1		0		2	
	SE TOTAL	3		2		3		4		0		3	
	COMMENT					C7 scour suspected				Bulk Validated - LOMR 05-09-0144P			

Sparks4 27



N

80

80

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Sparks4 CNMS Streams

Zones & Date of Effective Analysis

- AE, 11/1/1981
- AE, 12/1/1987
- AE, 7/19/1993

High Hazard Flooding Areas

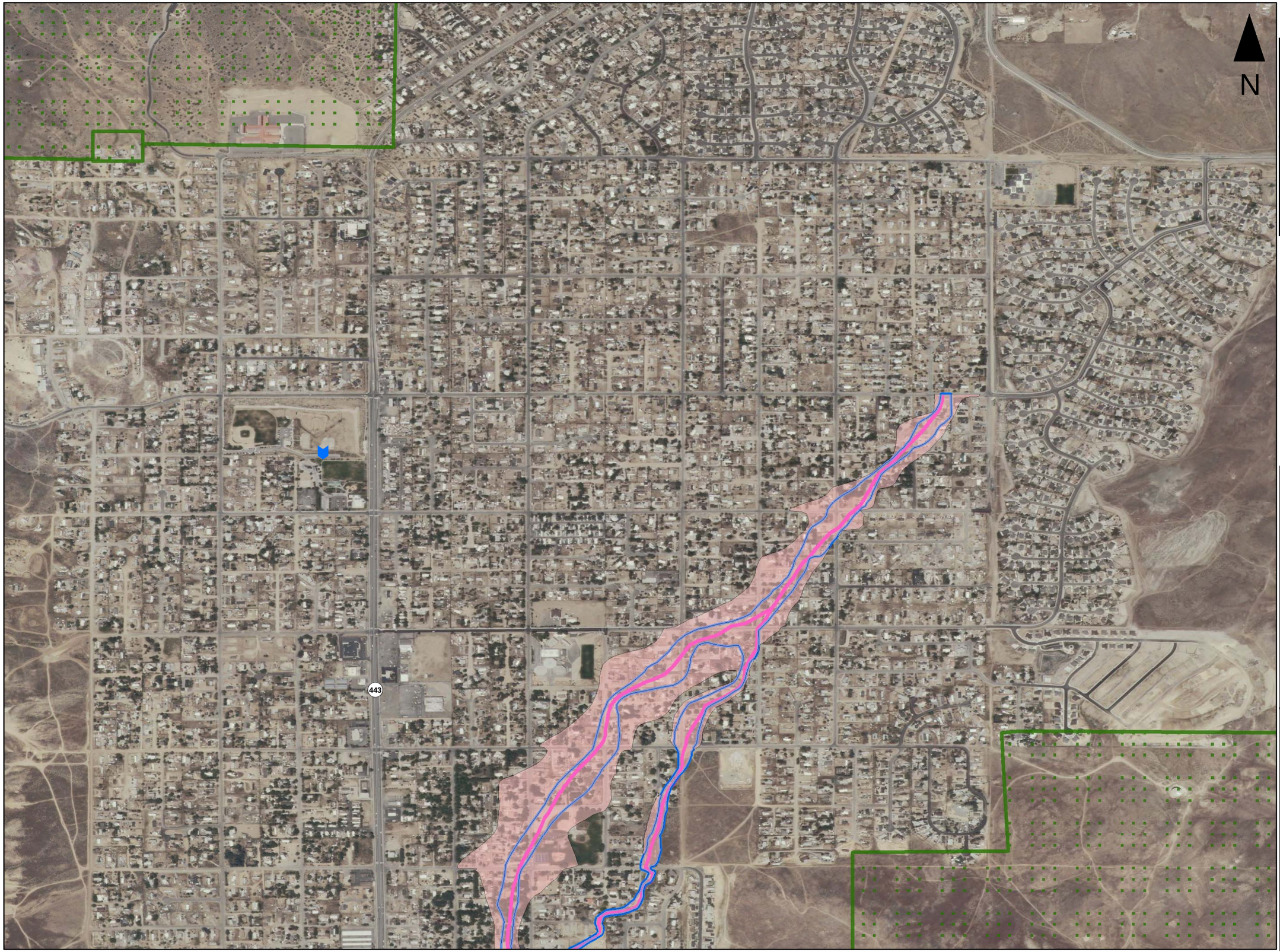
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information							
	WATER NAME	**Truckee River**		**Truckee River**		**Long Valley Creek**	
	FLOOD ZONE	AE		AE		AE	
	VALIDATION STATUS	VALID		VALID		VALID	
	STATUS TYPE	NVUE COMPLIANT		NVUE COMPLIANT		NVUE COMPLIANT	
	STATUS DATE	1/31/2011		1/31/2011		2/14/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	12/1/1987		11/1/1981		7/19/1993	
	HYDROLOGIC MODEL USED	GAGE ANALYSIS		OTHER	Rain Flood Prob Curve	HEC-1	
	HYDRAULIC MODEL USED	HEC-2		HEC-2		HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	YES		YES		NO	
	IS MODEL IN HADIGITAL FORMAT?	YES		YES		NO	
	CAN HODIGITAL MODEL BE RUN	YES		YES		UNKNOWN	
	CAN HADIGITAL MODEL BE RUN	YES		YES		UNKNOWN	
	Has there been a major change in gage record since effective analysis?	NO	YES-Gage on reach & poss peak flow occurred after analysis date	NO		NO	
	Is there a significant increase in Period of Record?	NO	YES-possibly	NO		NO	
	Is the Model Methodology no longer appropriate ?	NO		NO		NO	
	Has there been an addition or removal of a major flood control structure ?	NO		NO		NO	
	Is the current Channel outside of SFHA?	NO		NO		NO	
	Have there been more than 5 new or removed structures that impact a BFE ?	NO		NO		NO	
	Has the channel area changed due to significant fill or scour ?	NO		NO		UNKNOWN	
	Does this study use rural regression in urbanized areas?	YES		NO		NO	
	Are there Repetitive losses outside SFHA?	NO		NO		NO	
	Has impervious areas in sub-basin increased > 50% ?	YES		YES		YES	
	Has > 1 and < 5 structures been added or removed that impact a BFE?	NO		YES		NO	
	Has there been channel improvements?	NO		NO		NO	
	Is there the availability of better topography/bathymetry?	NO		NO		NO	
	Has there been changes to land use or vegetation?	NO		NO		NO	
	Have there been significant storms with HWM's?	NO		NO		NO	
	Are new Regression equations available?	NO		NO		NO	
	CE TOTAL	0		0		0	
	SE TOTAL	2		2		1	
	COMMENT			Hydro_Mdl = Rain Flood Prob. Curve			

Sun Valley2 29



Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Sun Valley2 CNMS Streams

Zone & Date of Effective Analysis

- AE, 11/1/1981

High Hazard Flooding Areas

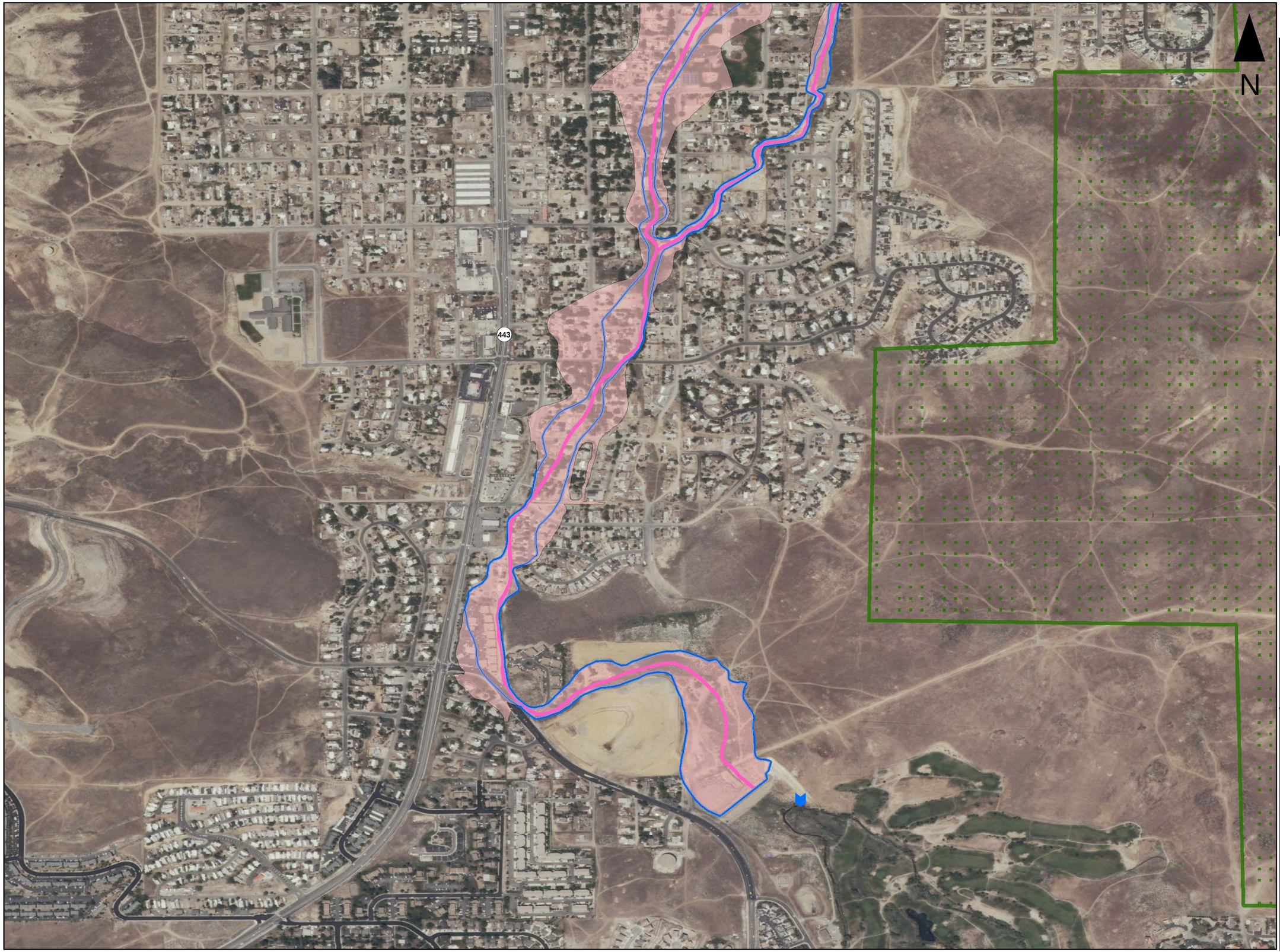
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information					
	WATER NAME	**Sun Valley Wash**		**Sun Valley Wash Split Flow**	
	FLOOD ZONE	AE		AE	
	VALIDATION STATUS	UNVERIFIED	INVALID	UNVERIFIED	INVALID
	STATUS TYPE	TO BE STUDIED		TO BE STUDIED	
	STATUS DATE	1/31/2011		1/31/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	11/1/1981		11/1/1981	
	HYDROLOGIC MODEL USED	HEC-1 4.1		HEC-1 4.1	
	HYDRAULIC MODEL USED	HEC-RAS		HEC-RAS	
	IS MODEL IN HODIGITAL FORMAT?	YES		NO	
	IS MODEL IN HADIGITAL FORMAT?	YES		NO	
	CAN HODIGITAL MODEL BE RUN	YES		NO	
	CAN HADIGITAL MODEL BE RUN	YES		NO	
Has there been a major change in gage record since effective analysis?		NO		NO	
Is there a significant increase in Period of Record?		NO		NO	
Is the Model Methodology no longer appropriate ?		NO		NO	
Has there been an addition or removal of a major flood control structure ?		NO		NO	
Is the current Channel outside of SFHA?		YES		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		YES		YES	
Has the channel area changed due to significant fill or scour ?		NO		NO	
Does this study use rural regression in urbanized areas?		YES		YES	
Are there Repetitive losses outside SFHA?		NO		NO	
Has impervious areas in sub-basin increased > 50% ?		YES		YES	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO		NO	
Has there been channel improvements?		YES		NO	
Is there the availability of better topography/bathymetry?		NO		NO	
Has there been changes to land use or vegetation?		NO		NO	
Have there been significant storms with HWM's?		NO		NO	
Are new Regression equations available?		NO		NO	
	CE TOTAL	2		1	
	SE TOTAL	3		2	
	COMMENT				

Sun Valley3 31



0 362.5 725 1,450 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

SunValley3 CNMS Streams

Zone & Date of Effective Analysis

- AE, 11/1/1981

High Hazard Flooding Areas

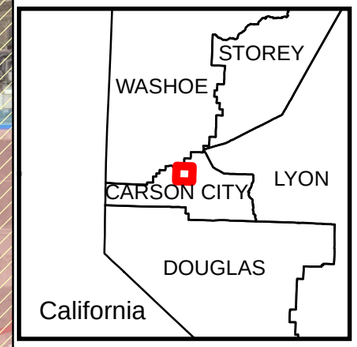
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information					
	WATER NAME	**Sun Valley Wash Split Flow**		**Sun Valley Wash**	
	FLOOD ZONE	AE		AE	
	VALIDATION STATUS	UNVERIFIED		UNVERIFIED	INVALID
	STATUS TYPE	TO BE STUDIED		TO BE STUDIED	
	STATUS DATE	1/31/2011		1/31/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	11/1/1981		11/1/1981	
	HYDROLOGIC MODEL USED	HEC-1 4.1		HEC-1 4.1	
	HYDRAULIC MODEL USED	HEC-RAS		HEC-RAS	
	IS MODEL IN HODIGITAL FORMAT?	NO		YES	
	IS MODEL IN HADIGITAL FORMAT?	NO		YES	
	CAN HODIGITAL MODEL BE RUN	NO		YES	
	CAN HADIGITAL MODEL BE RUN	NO		YES	
Has there been a major change in gage record since effective analysis?		NO		NO	
Is there a significant increase in Period of Record?		NO		NO	
Is the Model Methodology no longer appropriate ?		NO		NO	
Has there been an addition or removal of a major flood control structure ?		NO		NO	
Is the current Channel outside of SFHA?		NO		YES	
Have there been more than 5 new or removed structures that impact a BFE ?		YES		YES	
Has the channel area changed due to significant fill or scour ?		NO		NO	
Does this study use rural regression in urbanized areas?		YES		YES	
Are there Repetitive losses outside SFHA?		NO		NO	
Has impervious areas in sub-basin increased > 50% ?		YES		YES	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO		NO	
Has there been channel improvements?		NO		YES	
Is there the availability of better topography/bathymetry?		NO		NO	
Has there been changes to land use or vegetation?		NO		NO	
Have there been significant storms with HWM's?		NO		NO	
Are new Regression equations available?		NO		NO	
	CE TOTAL	1		2	
	SE TOTAL	2		3	
	COMMENT				

Carson City1 33



0 500 1,000 2,000 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

Carson1 CNMS Streams

Zone & Date of Effective Analysis

- AE, 12/1/1982
- AH, 12/1/1982
- AO, 12/1/1982
- AO, 3/16/1989

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	EAGLE VALLEY CREEK	GONI CANYON CREEK	GONI CANYON CREEK	EAGLE VALLEY CREEK	COMBS CANYON CREEK	VICEE CANYON CREEK	COMBS CANYON CREEK	
	FLOOD ZONE	AE	AE	AE	AH	AH	AO	AO	
	VALIDATION STATUS	UNVERIFIED	VALID	UNVERIFIED	UNVERIFIED	VALID	VALID	VALID	
	STATUS TYPE	TO BE STUDIED	NVUE COMPLIANT	TO BE STUDIED	TO BE STUDIED	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	
	STATUS DATE	3/30/2012	3/30/2012	3/30/2012	3/30/2012	3/30/2012	3/30/2012	3/30/2012	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	12/1/1982	12/1/1982	12/1/1982	12/1/1982	12/1/1982	3/16/1989	12/1/1982	
	HYDROLOGIC MODEL USED	TR-20 (FEBRUARY 1992)	TR-20 (FEBRUARY 1992)	TR-20 (FEBRUARY 1992)	OTHER	TR-20 (FEBRUARY 1992)	HEC-1	TR-20 (FEBRUARY 1992)	
	HYDRAULIC MODEL USED	HEC-2	OTHER	HEC-2	HEC-2	OTHER	HEC-2	HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	NO	NO	NO	NO	NO	NO	NO	
	IS MODEL IN HADIGITAL FORMAT?	NO	NO	NO	NO	NO	NO	NO	
	CAN HODIGITAL MODEL BE RUN	NO	NO	NO	NO	NO	NO	NO	
	CAN HADIGITAL MODEL BE RUN	NO	NO	NO	NO	NO	NO	NO	
Has there been a major change in gage record since effective analysis?		NO	NO	NO	NO	NO	NO	NO	
Is there a significant increase in Period of Record?		NO	NO	NO	NO	NO	NO	NO	
Is the Model Methodology no longer appropriate ?		NO	NO	NO	NO	NO	NO	NO	
Has there been an addition or removal of a major flood control structure ?		NO	NO	NO	NO	NO	NO	NO	
Is the current Channel outside of SFHA?		NO	NO	NO	YES	NO	NO	NO	
Have there been more than 5 new or removed structures that impact a BFE ?		YES	NO	NO	YES	NO	NO	NO	
Has the channel area changed due to significant fill or scour ?		NO	NO	NO	YES	NO	NO	NO	
Does this study use rural regression in urbanized areas?		NO	NO	NO	NO	NO	NO	NO	
Are there Repetitive losses outside SFHA?		NO	NO	NO	UNKNOWN	NO	NO	NO	
Has impervious areas in sub-basin increased > 50% ?		YES	YES	YES	NO	YES	YES	YES	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO	NO	YES	NO	NO	NO	NO	
Has there been channel improvements?		NO	NO	YES	NO	YES	NO	YES	
Is there the availability of better topography/bathymetry?		NO	NO	NO	NO	NO	NO	NO	
Has there been changes to land use or vegetation?		NO	NO	NO	YES	NO	NO	NO	
Have there been significant storms with HWM's?		NO	NO	NO	NO	NO	NO	NO	
Are new Regression equations available?		NO	NO	NO	UNKNOWN	NO	NO	NO	
	CE TOTAL	1	0	0	3	0	0	0	
	SE TOTAL	1	1	4	2	2	1	2	
	COMMENT		Hydra: Alluvial Fan Methodology: "Flood Frequency Estimates on Alluvial Fans, Jorunal of the Hydraulics Div. ASCE, Proceedings, 1979"		Peak discharges using NRCS rainfall-runoff Program	Hydra: Alluvial Fan Methodology: "Flood Frequency Estimates on Alluvial Fans, Jorunal of the Hydraulics Div. ASCE, Proceedings, 1979"	Revision: New H&H		

CarsonCity2

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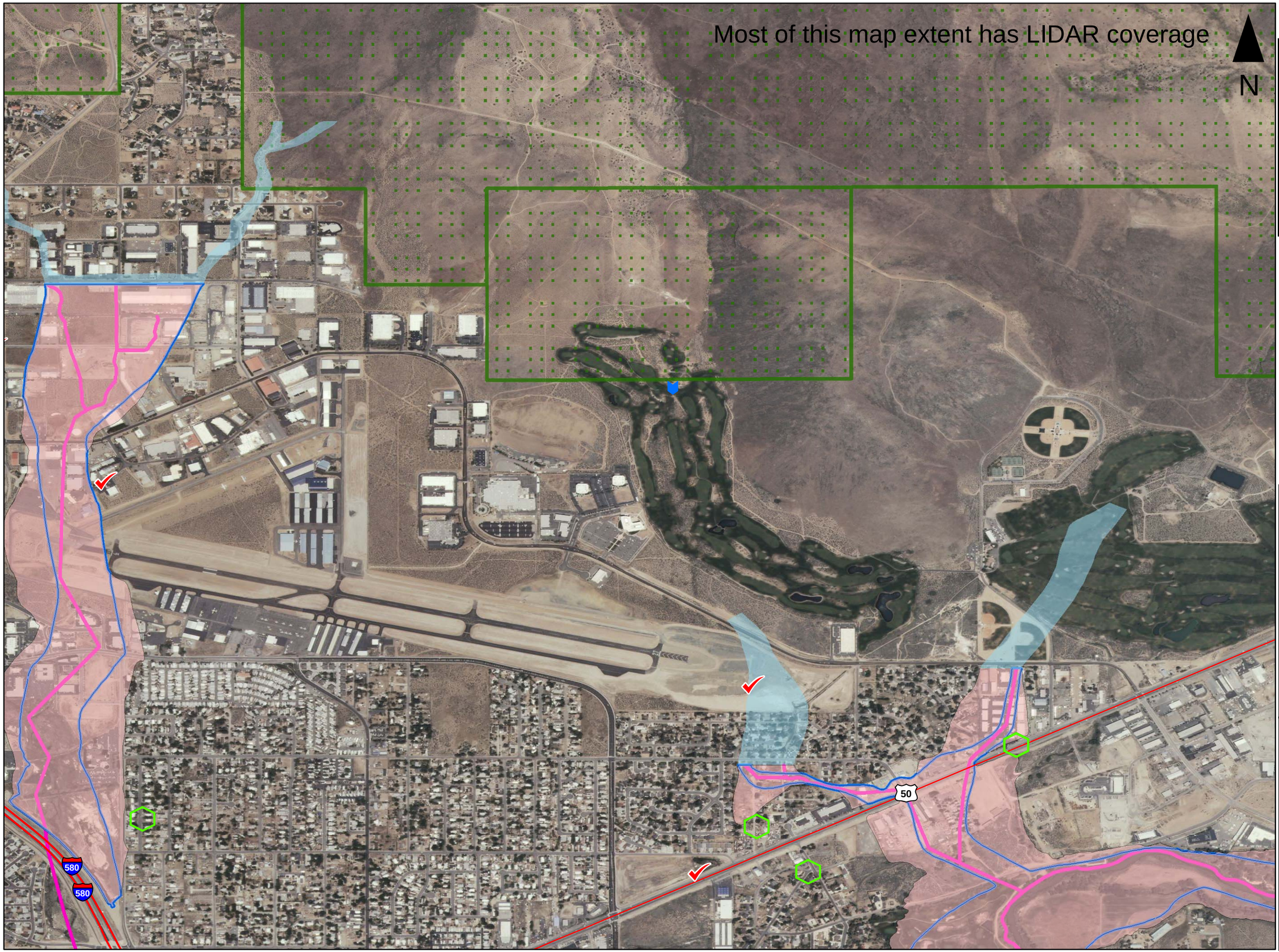

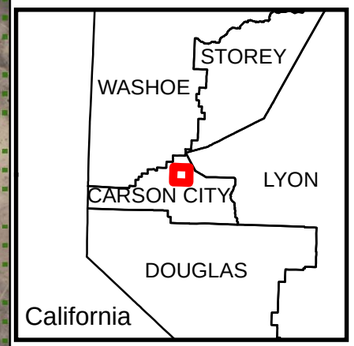

0 500 1,000 2,000 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

Carson2 CNMS Streams

Zone & Date of Effective Analysis

- AE, 12/1/1982

High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	CARSON RIVER	GONI CANYON CREEK	GONI CANYON CREEK	GOLF COURSE CREEK A	GOLF COURSE CREEK B	GONI CANYON CREEK	
	FLOOD ZONE	AE	AE	AE	AE	AE	AE	
	VALIDATION STATUS	VALID	VALID	VALID	UNVERIFIED	UNVERIFIED	UNVERIFIED	
	STATUS TYPE	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	TO BE STUDIED	TO BE STUDIED	TO BE STUDIED	
	STATUS DATE	3/30/2012	3/30/2012	3/30/2012	3/30/2012	3/30/2012	3/30/2012	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	12/1/1982	12/1/1982	12/1/1982	12/1/1982	12/1/1982	12/1/1982	
	HYDROLOGIC MODEL USED	GAGE ANALYSIS	TR-20 (FEBRUARY 1992)	TR-20 (FEBRUARY 1992)	TR-20 (FEBRUARY 1992)	TR-20 (FEBRUARY 1992)	TR-20 (FEBRUARY 1992)	
	HYDRAULIC MODEL USED	HEC-2	HEC-2	OTHER	HEC-2	HEC-2	HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	NO	NO	NO	NO	NO	NO	
	IS MODEL IN HADIGITAL FORMAT?	NO	NO	NO	NO	NO	NO	
	CAN HODIGITAL MODEL BE RUN	NO	NO	NO	NO	NO	NO	
	CAN HADIGITAL MODEL BE RUN	NO	NO	NO	NO	NO	NO	
Has there been a major change in gage record since effective analysis?		NO	NO	NO	NO	NO	NO	
Is there a significant increase in Period of Record?		NO	NO	NO	NO	NO	NO	
Is the Model Methodology no longer appropriate ?		NO	NO	NO	NO	NO	NO	
Has there been an addition or removal of a major flood control structure ?		NO	NO	NO	NO	NO	NO	
Is the current Channel outside of SFHA?		NO	NO	NO	YES	11	NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO	NO	NO	NO	NO	NO	
Has the channel area changed due to significant fill or scour ?		NO	NO	NO	NO	NO	NO	
Does this study use rural regression in urbanized areas?		NO	NO	NO	NO	NO	NO	
Are there Repetitive losses outside SFHA?		NO	NO	NO	NO	NO	NO	
Has impervious areas in sub-basin increased > 50% ?		YES	YES	YES	YES	YES	YES	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO	NO	NO	NO	NO	NO	YES - Lidar avail, Carson River Watershed Project
Has there been channel improvements?		NO	YES	NO	YES	YES	YES	
Is there the availability of better topography/bathymetry?		YES	YES	YES	YES	YES	YES	
Has there been changes to land use or vegetation?		NO	NO	NO	NO	NO	NO	
Have there been significant storms with HWM's?		NO	NO	NO	NO	NO	NO	
Are new Regression equations available?		NO	NO	NO	NO	NO	NO	
	CE TOTAL	0	0	0	1	1	0	
	SE TOTAL	2	3	1	3	4	4	
	COMMENT	Hydro: Log Pearson Type III Gage: 10311000		Hydra: Alluvial Fan Methodology: "Flood Frequency Estimates on Alluvial Fans, Jorunal of the Hydraulics Div. ASCE, Proceedings, 1979"				

CarsonCity3

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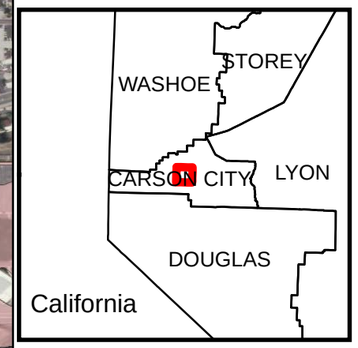


0 500 1,000 2,000 Feet

N

529

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Carson3 CNMS Streams

Zones & Date of Effective Analysis

- AH, 12/1/1982
- AH, 4/6/1999
- AH, 5/11/1992
- AO, 12/1/1982
- AO, UNKNOWN

High Hazard Flooding Areas

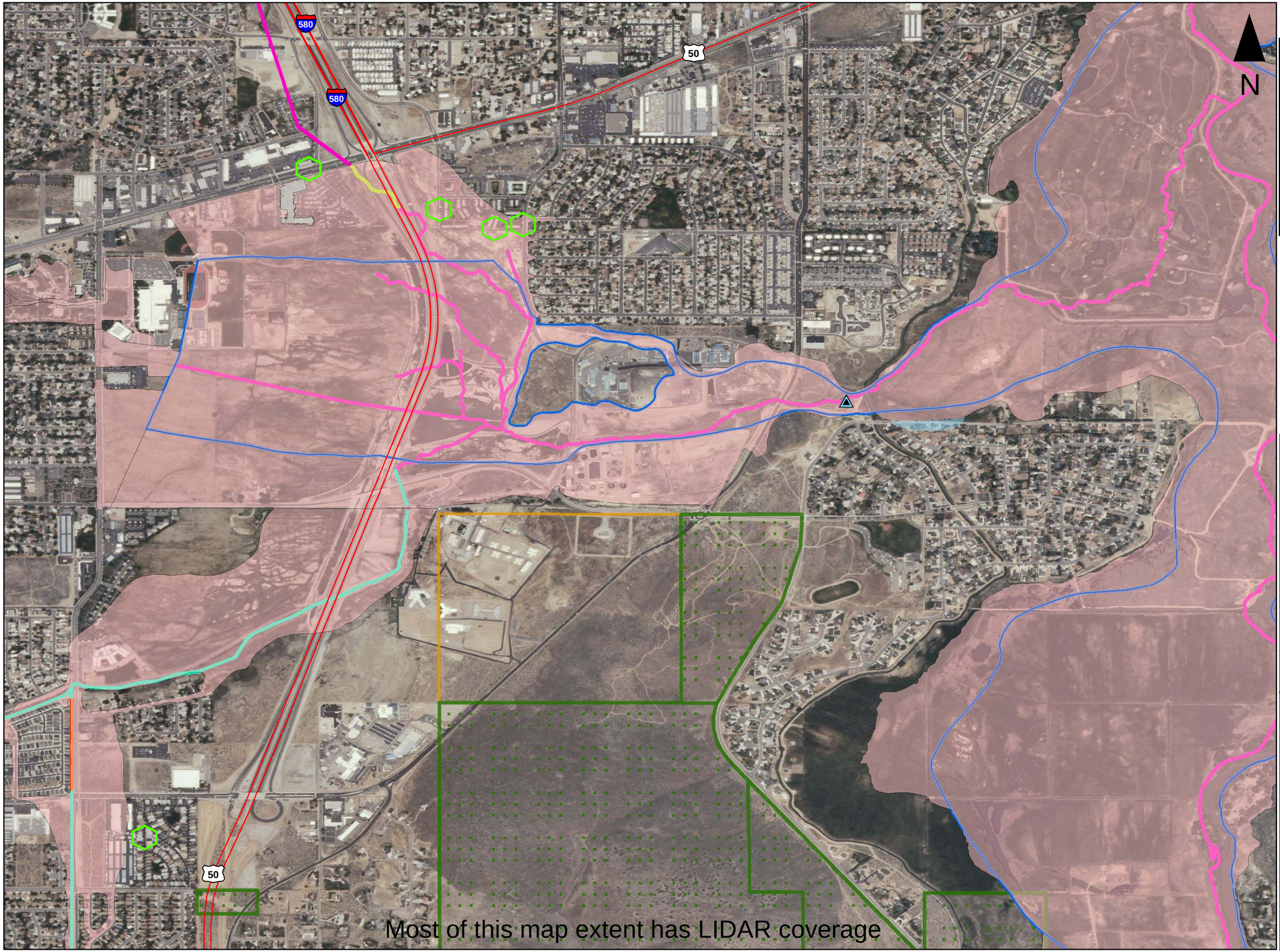
- Zone A (Approx)
- Detailed Studies
- Floodways

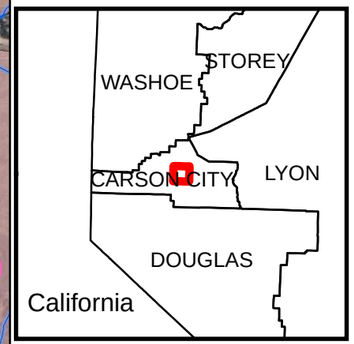
Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	SALIMAN ROAD TRIBUTARY	VOLTAIRE CANYON CREEK	H TRIBUTARY	Kings Split	KINGS CANYON CREEK	ASH CANYON CREEK	SALIMAN ROAD TRIBUTARY	SALIMAN ROAD TRIBUTARY	
	FLOOD ZONE	AH	AH	AH	AO	AO	AO	AH	AH	
	VALIDATION STATUS	VALID	VALID	VALID	VALID	UNVERIFIED	VALID	VALID	VALID	
	STATUS TYPE	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	BEING STUDIED	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	
	STATUS DATE	3/30/2012	3/30/2012	3/30/2012	3/30/2012	3/30/2012	3/30/2012	3/30/2012	3/30/2012	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	NEW DETAILED	NEW DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	12/1/1982	12/1/1982	12/1/1982	12/1/1982		12/1/1982	5/11/1992	12/1/1982	
	HYDROLOGIC MODEL USED	TR-20 (FEBRUARY 1992)	TR-20 (FEBRUARY 1992)	HEC-1	TR-20 (FEBRUARY 1992)		TR-20 (FEBRUARY 1992)	HEC-1	TR-20 (FEBRUARY 1992)	
	HYDRAULIC MODEL USED	OTHER	HEC-2	HEC-2	HEC-2	OTHER	OTHER	HEC-2	HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	NO	NO	NO	NO	NO	NO	NO	NO	
	IS MODEL IN HADIGITAL FORMAT?	NO	NO	NO	NO	NO	YES	NO	NO	
	CAN HODIGITAL MODEL BE RUN	NO	NO	NO	NO	NO	NO	NO	NO	
	CAN HADIGITAL MODEL BE RUN	NO	NO	NO	NO	NO	YES	NO	NO	
Has there been a major change in gage record since effective analysis?		NO	NO	NO	NO	NO	NO	NO	NO	
Is there a significant increase in Period of Record?		NO	NO	NO	NO	NO	NO	NO	NO	
Is the Model Methodology no longer appropriate ?		NO	NO	NO	NO	NO	NO	NO	NO	
Has there been an addition or removal of a major flood control structure ?		NO	NO	NO	NO	NO	NO	NO	NO	
Is the current Channel outside of SFHA?		NO	NO	NO	NO	NO	NO	NO	NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO	NO	NO	NO	NO	NO	NO	NO	
Has the channel area changed due to significant fill or scour ?		NO	NO	NO	NO	NO	NO	NO	NO	
Does this study use rural regression in urbanized areas?		NO	NO	NO	NO	NO	NO	NO	NO	
Are there Repetitive losses outside SFHA?		NO	NO	NO	NO	NO	NO	NO	NO	
Has impervious areas in sub-basin increased > 50% ?		YES	YES	YES	YES	NO	NO	YES	YES	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO	NO	NO	NO	NO	NO	NO	NO	
Has there been channel improvements?		NO	NO	NO	NO	NO	NO	NO	NO	
Is there the availability of better topography/bathymetry?		NO	NO	NO	NO	NO	NO	NO	NO	
Has there been changes to land use or vegetation?		NO	NO	NO	NO	NO	NO	NO	NO	
Have there been significant storms with HWM's?		NO	NO	NO	NO	NO	NO	NO	NO	
Are new Regression equations available?		NO	NO	NO	NO	NO	NO	NO	NO	
	CE TOTAL	0	0	0	0	0	0	0	0	
	SE TOTAL	1	1	2	2	0	0	1	1	
	COMMENT	Hydra: Normal Depth Calculations		Revision: New H&H		INVALID - BEING STUDIED	LOMR -01-09-592P - BULK VALIDATED	LOMR -92-09-120P		

CarsonCity4





0 500 1,000 2,000 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

Carson4 CNMS Streams

Zone & Date of Effective Analysis

- AE, 11/29/2001
- AE, 12/1/1982
- AH, 12/1/1982
- AH, 4/6/1999

High Hazard Flooding Areas

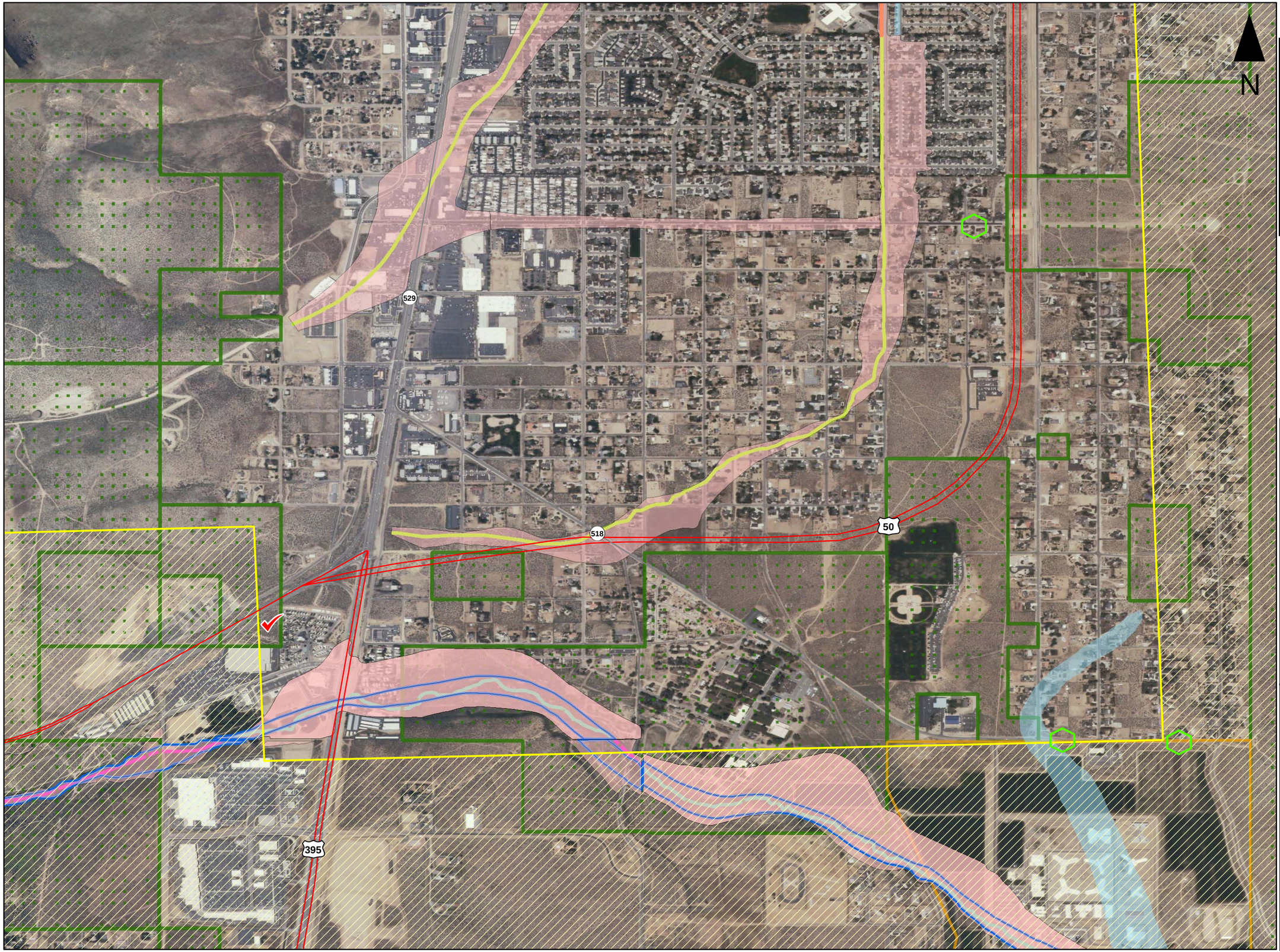
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	GONI CANYON CREEK	GONI CANYON CREEK	CARSON RIVER		GONI CANYON CREEK	KINGS CANYON CREEK	SALIMAN ROAD TRIBUTARY	H TRIBUTARY	SALIMAN ROAD TRIBUTARY	
	FLOOD ZONE	AE	AE	AE		AE	AE	AH	AH	AH	
	VALIDATION STATUS	UNVERIFIED	VALID	VALID		UNVERIFIED	VALID	VALID	VALID	VALID	
	STATUS TYPE	TO BE STUDIED	NVUE COMPLIANT	NVUE COMPLIANT		TO BE STUDIED	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	
	STATUS DATE	3/30/2012	3/30/2012	3/30/2012		3/30/2012	3/30/2012	3/30/2012	3/30/2012	3/30/2012	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	12/1/1982	12/1/1982	12/1/1982		11/29/2001	12/1/1982	4/6/1999	12/1/1982	12/1/1982	
	HYDROLOGIC MODEL USED	TR-20 (FEBRUARY 1992)	TR-20 (FEBRUARY 1992)	GAGE ANALYSIS		UNKNOWN	TR-20 (FEBRUARY 1992)	TR-20 (FEBRUARY 1992)	HEC-1	TR-20 (FEBRUARY 1992)	
	HYDRAULIC MODEL USED	HEC-2	OTHER	HEC-2		HEC-2	HEC-2	HEC-2	HEC-2	HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	NO	NO	NO		YES	NO	NO	NO	NO	
	IS MODEL IN HADIGITAL FORMAT?	NO	NO	NO		YES	NO	NO	NO	NO	
	CAN HODIGITAL MODEL BE RUN	NO	NO	NO		YES	NO	NO	NO	NO	
	CAN HADIGITAL MODEL BE RUN	NO	NO	NO		YES	NO	NO	NO	NO	
	Has there been a major change in gage record since effective analysis?	NO	NO	NO	Yes-gage on reach & peak is later than effective date	UNKNOWN	NO	NO	NO	NO	
	Is there a significant increase in Period of Record?	NO	NO	NO	YES	NO	NO	NO	NO	NO	
	Is the Model Methodology no longer appropriate ?	NO	NO	NO		UNKNOWN	NO	NO	NO	NO	
	control structure ?	NO	NO	NO		NO	NO	NO	NO	NO	
	Is the current Channel outside of SFHA?	NO	NO	NO		NO	NO	NO	NO	NO	
	that impact a BFE ?	NO	NO	NO		NO	NO	NO	NO	NO	
	scour ?	NO	NO	NO		NO	NO	NO	NO	NO	
	Does this study use rural regression in urbanized areas?	NO	NO	NO		NO	NO	NO	NO	NO	
	Are there Repetitive losses outside SFHA?	NO	NO	NO		NO	NO	NO	NO	NO	
	Has impervious areas in sub-basin increased > 50% ?	YES	YES	YES		YES	YES	YES	YES	YES	
	impact a BFE?	YES	NO	NO		YES	NO	NO	NO	NO	
	Has there been channel improvements?	YES	NO	NO		YES	NO	YES	NO	NO	
	Is there the availability of better topography/bathymetry?	YES	NO	YES		YES	YES	NO	YES	NO	YES - Lidar avail, Carson River Watershed Project
	Has there been changes to land use or vegetation?	NO	NO	NO		NO	NO	NO	NO	NO	
	Have there been significant storms with HWM's?	NO	NO	NO		NO	NO	NO	NO	NO	
	Are new Regression equations available?	NO	NO	NO		NO	NO	NO	NO	NO	
	CE TOTAL	0	0	0		0	0	0	0	0	
	SE TOTAL	4	1	2		4	2	3	2	1	
	COMMENT		Hydra: Alluvial Fan Methodology: "Flood Frequency Estimates on Alluvial Fans, Jorunal of the Hydraulics Div. ASCE, Proceedings, 1979"	Hydro: Log Pearson Type III Gage: 10311000		LOMR -01-09-066P		LOMR -99-09-113P	Revision: New H&H		

CarsonCity5



0 500 1,000 2,000 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Carson5 CNMS Streams

Zone & Date of Effecitve Analyis

- AE, 11/8/1999
- AE, 12/1/1982
- AH, 12/1/1982
- AH, 5/11/1992

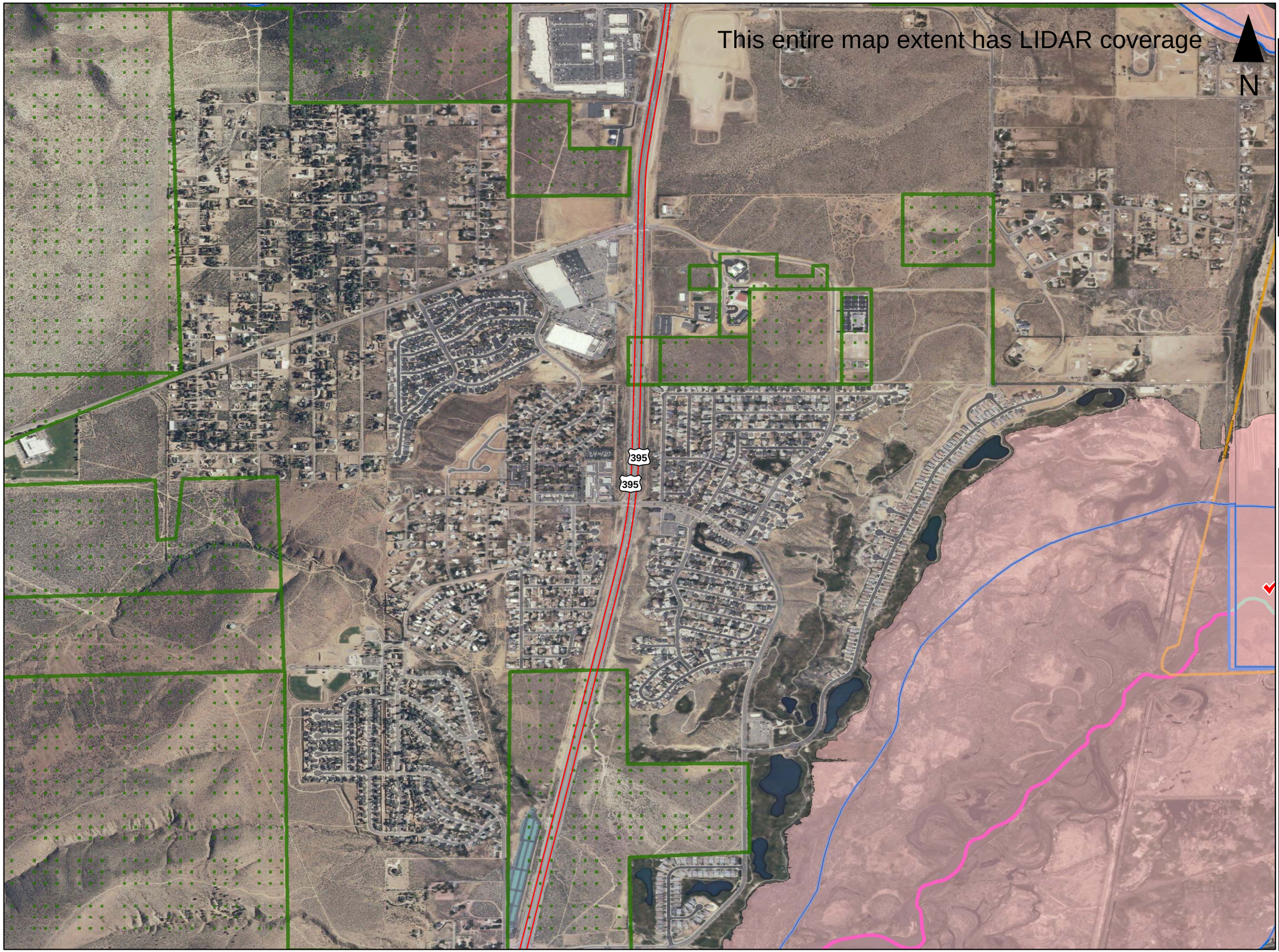
High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

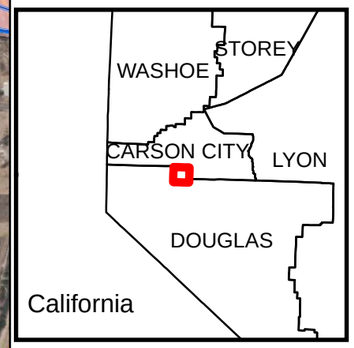
Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	SALIMAN ROAD TRIBUTARY	VOLTAIRE CANYON CREEK	Clear Creek	CLEAR CREEK	SALIMAN ROAD TRIBUTARY	
	FLOOD ZONE	AH	AH	AE	AE	AH	
	VALIDATION STATUS	VALID	VALID	VALID	VALID	VALID	
	STATUS TYPE	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	
	STATUS DATE	3/30/2012	3/30/2012	2/14/2011	3/30/2012	3/30/2012	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	12/1/1982	12/1/1982	11/8/1999	12/1/1982	5/11/1992	
	HYDROLOGIC MODEL USED	TR-20 (FEBRUARY 1992)	TR-20 (FEBRUARY 1992)	TR-20 (FEBRUARY 1992)	TR-20 (FEBRUARY 1992)	HEC-1	
	HYDRAULIC MODEL USED	OTHER	HEC-2	HEC-2	HEC-2	HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	NO	NO	NO	NO	NO	
	IS MODEL IN HADIGITAL FORMAT?	NO	NO	NO	NO	NO	
	CAN HODIGITAL MODEL BE RUN	NO	NO	UNKNOWN	NO	NO	
	CAN HADIGITAL MODEL BE RUN	NO	NO	UNKNOWN	NO	NO	
Has there been a major change in gage record since effective analysis?		NO	NO	NO	NO	NO	
Is there a significant increase in Period of Record?		NO	NO	NO	NO	NO	
Is the Model Methodology no longer appropriate ?		NO	NO	NO	NO	NO	
Has there been an addition or removal of a major flood control structure ?		NO	NO	NO	NO	NO	
Is the current Channel outside of SFHA?		NO	NO	NO	NO	NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO	NO	NO	NO	NO	
Has the channel area changed due to significant fill or scour ?		NO	NO	NO	NO	NO	
Does this study use rural regression in urbanized areas?		NO	NO	NO	NO	NO	
Are there Repetitive losses outside SFHA?		NO	NO	NO	NO	NO	
Has impervious areas in sub-basin increased > 50% ?		YES	YES	NO	NO	YES	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO	NO	YES	NO	NO	
Has there been channel improvements?		NO	NO	NO	NO	NO	
Is there the availability of better topography/bathymetry?		NO	NO	YES	YES	NO	YES - Lidar avail, Carson River Watershed Project
Has there been changes to land use or vegetation?		NO	NO	NO	NO	NO	
Have there been significant storms with HWM's?		NO	NO	NO	NO	NO	
Are new Regression equations available?		NO	NO	NO	NO	NO	
	CE TOTAL	0	0	0	0	0	
	SE TOTAL	1	1	2	1	1	
	COMMENT	Hydra: Normal Depth Calculations				LOMR -92-09-120P	



CarsonCity6



0 500 1,000 2,000 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

Carson6 CNMS Streams

Zone & Date of Effective Analysis

- AE, 4/4/1994
- AE, 9/30/1993

High Hazard Flooding Areas

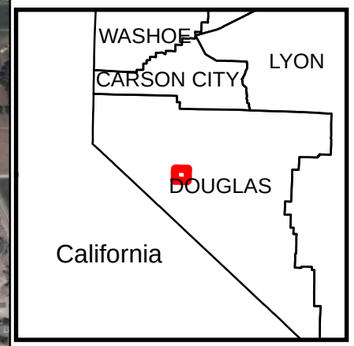
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information					
	WATER NAME	**CARSON RIVER**		**CARSON RIVER**	
	FLOOD ZONE	AE		AE	
	VALIDATION STATUS	VALID		VALID	
	STATUS TYPE	NVUE COMPLIANT		NVUE COMPLIANT	
	STATUS DATE	3/30/2012		2/14/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	9/30/1993		4/4/1994	
	HYDROLOGIC MODEL USED	GAGE ANALYSIS		GAGE ANALYSIS	
	HYDRAULIC MODEL USED	WSPRO (JUNE 1988)		WSPRO (JUNE 1988)	
	IS MODEL IN HODIGITAL FORMAT?	NO		NO	
	IS MODEL IN HADIGITAL FORMAT?	NO		NO	
	CAN HODIGITAL MODEL BE RUN	NO		UNKNOWN	
	CAN HADIGITAL MODEL BE RUN	NO		UNKNOWN	
Has there been a major change in gage record since effective analysis?		NO		NO	YES-gage on reach and peak after effective analysis date
Is there a significant increase in Period of Record?		NO		NO	YES
Is the Model Methodology no longer appropriate ?		NO		NO	
Has there been an addition or removal of a major flood control structure ?		NO		NO	
Is the current Channel outside of SFHA?		NO		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO		NO	
Has the channel area changed due to significant fill or scour ?		NO		NO	
Does this study use rural regression in urbanized areas?		NO		NO	
Are there Repetitive losses outside SFHA?		NO		NO	
Has impervious areas in sub-basin increased > 50% ?		NO		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO		NO	
Has there been channel improvements?		NO		NO	
Is there the availability of better topography/bathymetry?		YES		YES	YES - Lidar avail, Carson River Watershed Project
Has there been changes to land use or vegetation?		NO		NO	
Have there been significant storms with HWM's?		NO		NO	
Are new Regression equations available?		NO		NO	
	CE TOTAL	0		0	
	SE TOTAL	1		1	
	COMMENT	Hydro: Log Pearson Type III Gage: 10311000			

Gardnerville 45



0 410 820 1,640 Feet

N

395

756

This entire map extent has LIDAR coverage

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

Gardnerville CNMS Streams

Zone & Date of Effective Analysis

- AE, 2/1/1979
- AE, 6/5/1997
- AO, 6/5/1997

High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	Martin Slough		Cottonwood Slough		East Fork Carson River		East Fork Carson River	
	FLOOD ZONE	AE		AE		AE		AO	
	VALIDATION STATUS	VALID		VALID		VALID		VALID	
	STATUS TYPE	NVUE COMPLIANT		NVUE COMPLIANT		NVUE COMPLIANT		NVUE COMPLIANT	
	STATUS DATE	2/14/2011		2/14/2011		2/14/2011		2/14/2011	
	STUDY TYPE	DETAILED		DETAILED		DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	2/1/1979		6/5/1997		6/5/1997		6/5/1997	
	HYDROLOGIC MODEL USED	OTHER		UNKNOWN		GAGE ANALYSIS		GAGE ANALYSIS	
	HYDRAULIC MODEL USED	HEC-2		OTHER		HEC-2		HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	YES		YES		YES		YES	
	IS MODEL IN HADIGITAL FORMAT?	YES		YES		YES		YES	
	CAN HODIGITAL MODEL BE RUN	UNKNOWN		UNKNOWN		UNKNOWN		UNKNOWN	
	CAN HADIGITAL MODEL BE RUN	UNKNOWN		UNKNOWN		UNKNOWN		UNKNOWN	
Has there been a major change in gage record since effective analysis?		NO		NO		NO		NO	
Is there a significant increase in Period of Record?		NO		NO		NO		NO	
Is the Model Methodology no longer appropriate ?		NO		NO		NO		NO	
Has there been an addition or removal of a major flood control structure ?		NO		NO		NO		NO	
Is the current Channel outside of SFHA?		NO		NO		NO		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO		NO		NO		NO	
Has the channel area changed due to significant fill or scour ?		NO		UNKNOWN		UNKNOWN		UNKNOWN	
Does this study use rural regression in urbanized areas?		NO		UNKNOWN		NO		NO	
Are there Repetitive losses outside SFHA?		NO		NO		NO		NO	
Has impervious areas in sub-basin increased > 50% ?		NO		YES		YES		YES	
Has > 1 and < 5 structures been added or removed that impact a BFE?		YES		YES		NO		NO	
Has there been channel improvements?		NO		NO		NO		NO	
Is there the availability of better topography/bathymetry?		YES	LIDAR-Carson R Valley Project	YES	LIDAR-Carson R Valley Project	YES	LIDAR-Carson R Valley Project	YES	LIDAR-Carson R Valley Project
Has there been changes to land use or vegetation?		NO		NO		NO		NO	
Have there been significant storms with HWM's?		NO		NO		NO		NO	
Are new Regression equations available?		NO		NO		NO		NO	
	CE TOTAL	NO		NO		NO		NO	
	SE TOTAL	0		0		0		0	
	COMMENT	2		ould be INVALID on C7 only, C7 changed to Unknown and polygon to VALID per guidelines revision 3-11-2011		ould be INVALID on C7 only, C7 changed to Unknown and polygon to VALID per guidelines revision 3-11-2011		ould be INVALID on C7 only, C7 changed to Unknown and polygon to VALID per guidelines revision 3-11-2011	

Genoa 47

0 487.5 975 1,950 Feet

N

206

This entire map extent has LIDAR coverage

There are no CNMS stream segments in this map extent

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

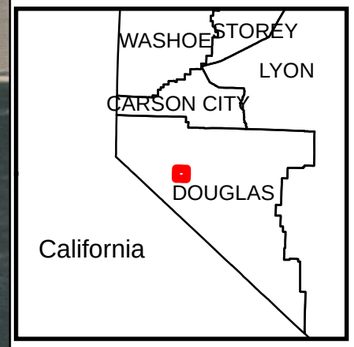
High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

The City of Genoa, in Douglas County, Nevada is in a FEMA mapped flood zone A. Detailed studies of this area need to be completed.

Minden

This entire map extent has LIDAR coverage



0 410 820 1,640 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

Minden CNMS Streams

Zone & Date of Effective Analysis

- AE, 2/1/1979
- AE, 6/5/1997

High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

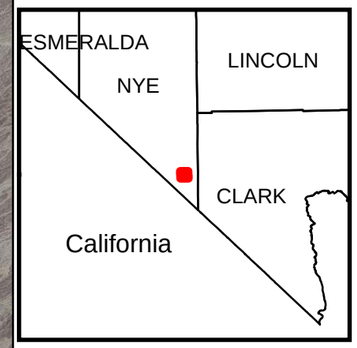
Study Reach Engineering and Modeling Information						
WATER NAME	**Martin Slough**		**Cottonwood Slough**		**East Fork Carson River**	
FLOOD ZONE	AE		AE		AE	
VALIDATION STATUS	VALID		VALID		VALID	
STATUS TYPE	NVUE COMPLIANT		NVUE COMPLIANT		NVUE COMPLIANT	
STATUS DATE	2/14/2011		2/14/2011		2/14/2011	
STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	
DATE OF EFFECTIVE ANALYSIS	2/1/1979		6/5/1997		6/5/1997	
HYDROLOGIC MODEL USED	OTHER		UNKNOWN		GAGE ANALYSIS	
HYDRAULIC MODEL USED	HEC-2		OTHER		HEC-2	
IS MODEL IN HODIGITAL FORMAT?	YES		YES		YES	
IS MODEL IN HADIGITAL FORMAT?	YES		YES		YES	
CAN HODIGITAL MODEL BE RUN	UNKNOWN		UNKNOWN		UNKNOWN	
CAN HADIGITAL MODEL BE RUN	UNKNOWN		UNKNOWN		UNKNOWN	
Has there been a major change in gage record since effective analysis?	NO		NO		NO	
Is there a significant increase in Period of Record?	NO		NO		NO	
Is the Model Methodology no longer appropriate ?	NO		NO		NO	
Has there been an addition or removal of a major flood control structure ?	NO		NO		NO	
Is the current Channel outside of SFHA?	NO		NO		NO	
Have there been more than 5 new or removed structures that impact a BFE ?	NO		NO		NO	
Has the channel area changed due to significant fill or scour ?	NO		UNKNOWN		UNKNOWN	
Does this study use rural regression in urbanized areas?	NO		UNKNOWN		NO	
Are there Repetitive losses outside SFHA?	NO		NO		NO	
Has impervious areas in sub-basin increased > 50% ?	NO		YES		YES	
Has > 1 and < 5 structures been added or removed that impact a BFE?	YES		YES		NO	
Has there been channel improvements?	NO		NO		NO	
Is there the availability of better topography/bathymetry?	YES		YES		YES	
Has there been changes to land use or vegetation?	NO		NO		NO	
Frontal Dune (Not for NEVADA)	NO		NO		NO	
Have there been significant storms with HWM's?	NO		NO		NO	
Are new Regression equations available?	NO		NO		NO	
CE TOTAL	0		0		0	
SE TOTAL	2		3		2	
COMMENT			ould be INVALID on C7 only, C7 changed to Unknown and polygon to VALID per guidelines revision 3-11-2011		ould be INVALID on C7 only, C7 changed to Unknown and polygon to VALID per guidelines revision 3-11-2011	

There are no CNMS stream segments in this map extent

This entire map extent has LIDAR coverage

N

Pahrump 1 51



0 950 1,900 3,800 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

FEMA is currently working with the community of Nye County to complete a detailed study in Pahrump Valley, but the maps have not yet been accepted.

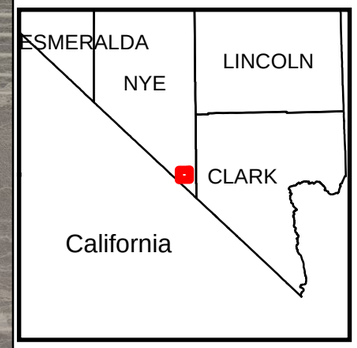
There are no CNMS stream segments in this map extent This entire map extent has LIDAR coverage

N

160

372

Pahrump 2 53



0 1,450 2,900 5,800 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

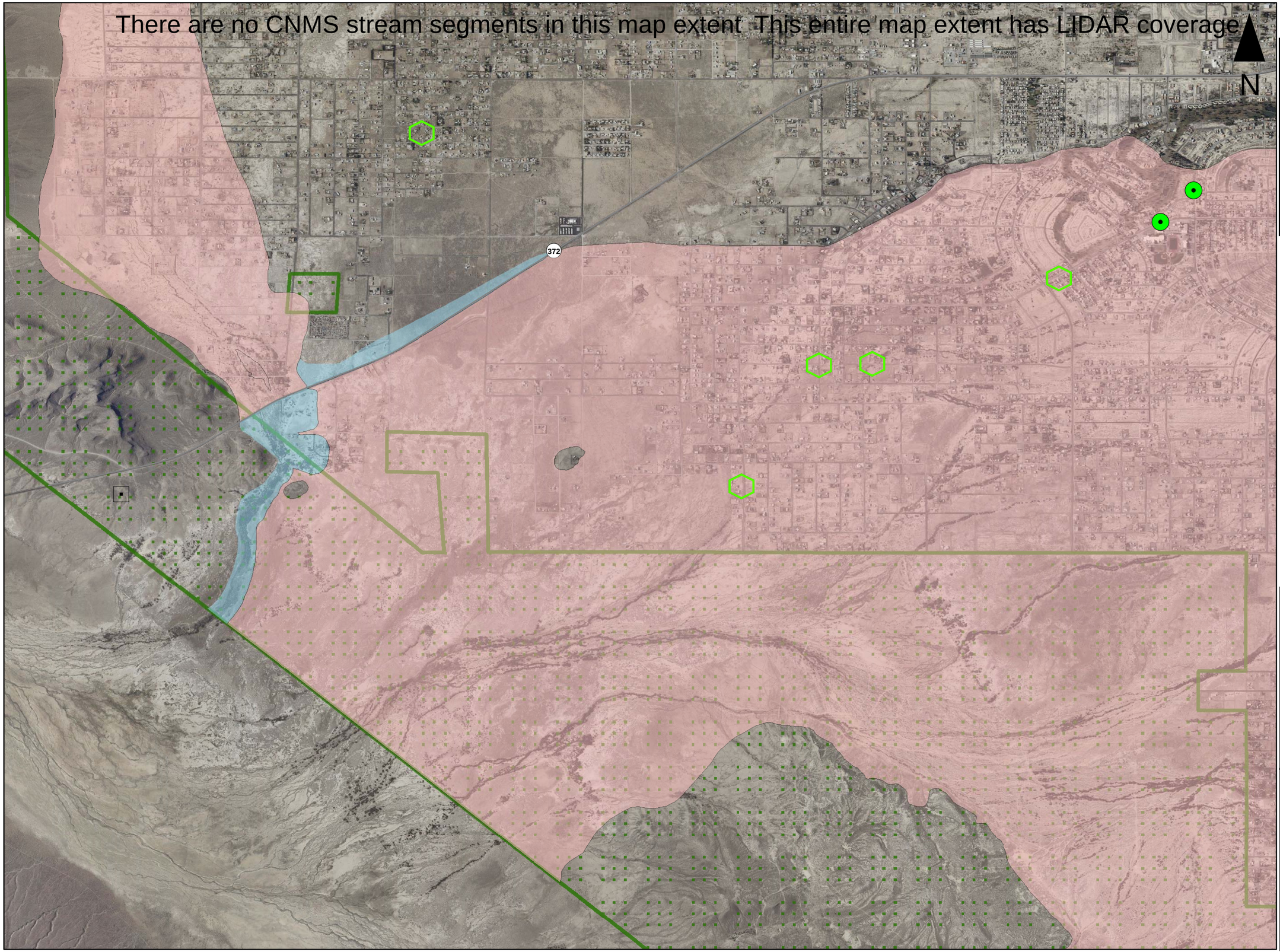
High Hazard Flooding Areas

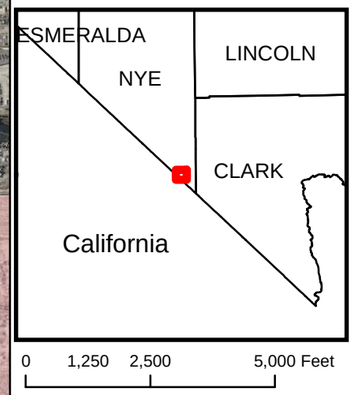
- Zone A (Approx)
- Detailed Studies
- Floodways

FEMA is currently working with the community of Nye County to complete a detailed study in Pahrump Valley, but the maps have not yet been accepted.

Pahrump 3 55

There are no CNMS stream segments in this map extent. This entire map extent has LIDAR coverage.





Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

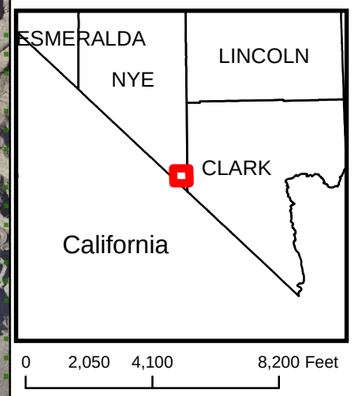
High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

FEMA is currently working with the community of Nye County to complete a detailed study in Pahrump Valley, but the maps have not yet been accepted.

There are no CNMS stream segments in this map extent. This entire map extent has LIDAR coverage.

Pahrump 4



N

372

160

Legend

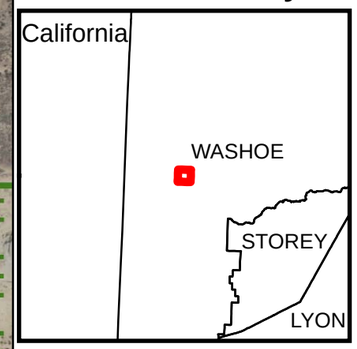
- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

FEMA is currently working with the community of Nye County to complete a detailed study in Pahrump Valley, but the maps have not yet been accepted.

Golden Valley 59



0 410 820 1,640 Feet

N

395

395

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Golden Valley CNMS Streams

Zone & Date of Effective Analysis

- AE, 11/1/1981

High Hazard Flooding Areas

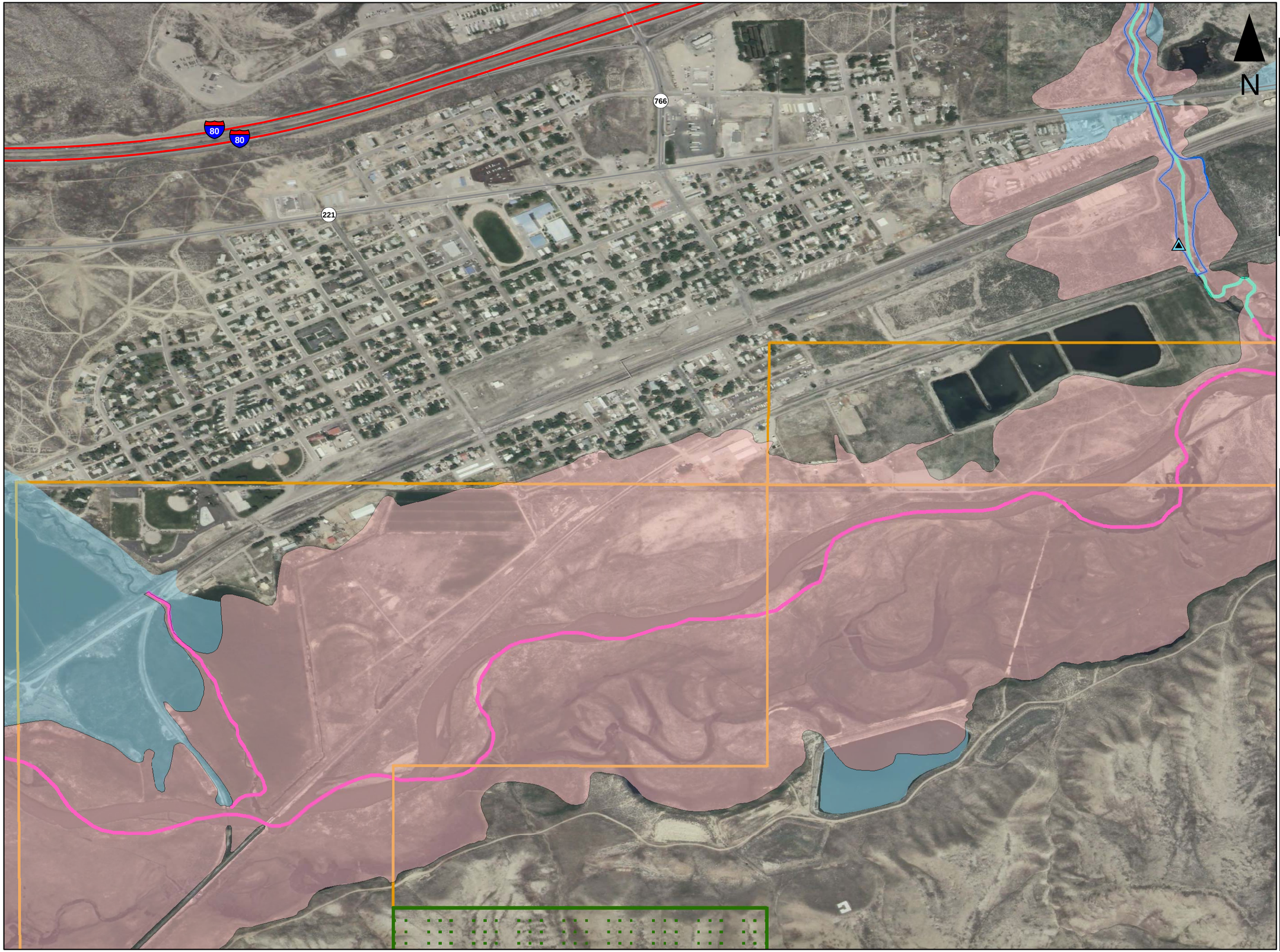
- Zone A (Approx)
- Detailed Studies
- Floodways

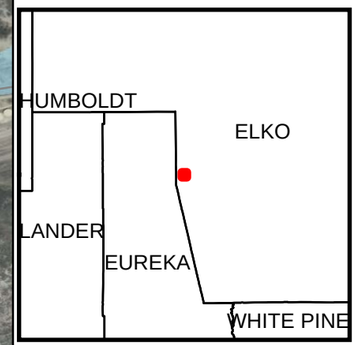
Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information			
	WATER NAME	**Golden Valley Wash**	
	FLOOD ZONE	AE	
	VALIDATION STATUS	UNVERIFIED	
	STATUS TYPE	TO BE STUDIED	
	STATUS DATE	1/31/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	11/1/1981	
	HYDROLOGIC MODEL USED	HEC-1 4.1	
	HYDRAULIC MODEL USED	HEC-RAS	
	IS MODEL IN HODIGITAL FORMAT?	YES	
	IS MODEL IN HADIGITAL FORMAT?	YES	
	CAN HODIGITAL MODEL BE RUN	YES	
	CAN HADIGITAL MODEL BE RUN	YES	
Has there been a major change in gage record since effective analysis?		NO	
Is there a significant increase in Period of Record?		NO	
Is the Model Methodology no longer appropriate ?		NO	
Has there been an addition or removal of a major flood control structure ?		NO	
Is the current Channel outside of SFHA?		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		YES	
Has the channel area changed due to significant fill or scour ?		NO	
Does this study use rural regression in urbanized areas?		NO	
Are there Repetitive losses outside SFHA?		NO	
Has impervious areas in sub-basin increased > 50% ?		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		YES	
Has there been channel improvements?		NO	
Is there the availability of better topography/bathymetry?		NO	
Has there been changes to land use or vegetation?		NO	
Have there been significant storms with HWM's?		NO	
Are new Regression equations available?		NO	
	CE TOTAL	1	
	SE TOTAL	1	
	COMMENT		

Carlin





Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Carlin CNMS Streams

Zones & Date of Effectivie Analysis

- AE, 11/1/1980
- AE, 9/1/1990

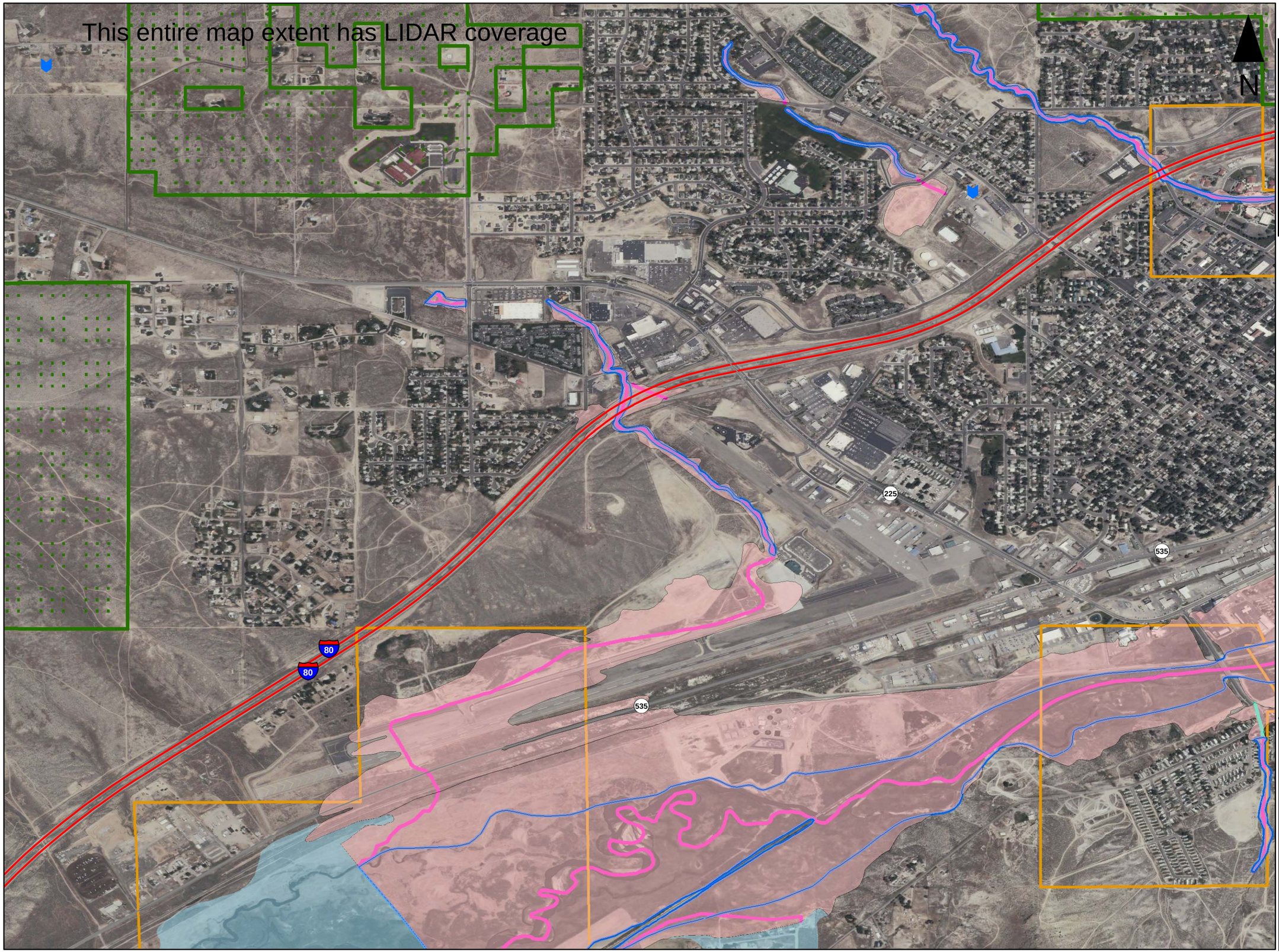
High Hazard Flooding Areas

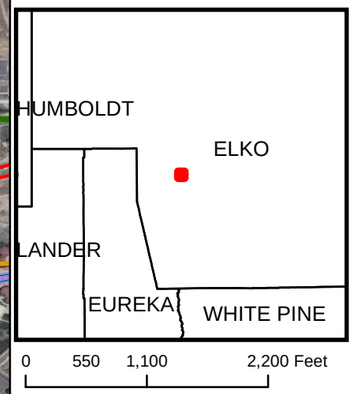
- Zone A (Approx)
- Detailed Studies
- Floodways
- Carlin State Land
- Carlin Fed Land

Study Reach Engineering and Modeling Information					
	WATER NAME	Maggie Creek		Humboldt River (at Carlin)	
	FLOOD ZONE	AE		AE	
	VALIDATION STATUS	VALID		VALID	
	STATUS TYPE	NVUE COMPLIANT		NVUE COMPLIANT	
	STATUS DATE	2/15/2011		2/15/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	9/1/1990		11/1/1980	
	HYDROLOGIC MODEL USED	GAGE ANALYSIS		UNKNOWN	
	HYDRAULIC MODEL USED	WSPRO (JUNE 1988)		HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	NO		YES	
	IS MODEL IN HADIGITAL FORMAT?	NO		YES	
	CAN HODIGITAL MODEL BE RUN	UNKNOWN		UNKNOWN	
	CAN HADIGITAL MODEL BE RUN	12		UNKNOWN	
Has there been a major change in gage record since effective analysis?		NO-gage on reach	gage on stream - no higher peak after effective analysis date	NO	
Is there a significant increase in Period of Record?		NO		NO	
Is the Model Methodology no longer appropriate ?		NO		NO	
Has there been an addition or removal of a major flood control structure ?		NO		NO	
Is the current Channel outside of SFHA?		NO		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO		NO	
Has the channel area changed due to significant fill or scour ?		NO		UNKNOWN	
Does this study use rural regression in urbanized areas?		NO		NO	
Are there Repetitive losses outside SFHA?		NO		NO	
Has impervious areas in sub-basin increased > 50% ?		NO		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO		NO	
Has there been channel improvements?		NO		NO	
Is there the availability of better topography/bathymetry?		NO		NO	
Has there been changes to land use or vegetation?		NO		NO	
Have there been significant storms with HWM's?		NO		NO	
Are new Regression equations available?		NO		NO	
	CE TOTAL	0		0	
	SE TOTAL	0		0	
	COMMENT				

Elko1

This entire map extent has LIDAR coverage





Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

Elko1 CNMS Streams

Zones & Date of Effective Analysis

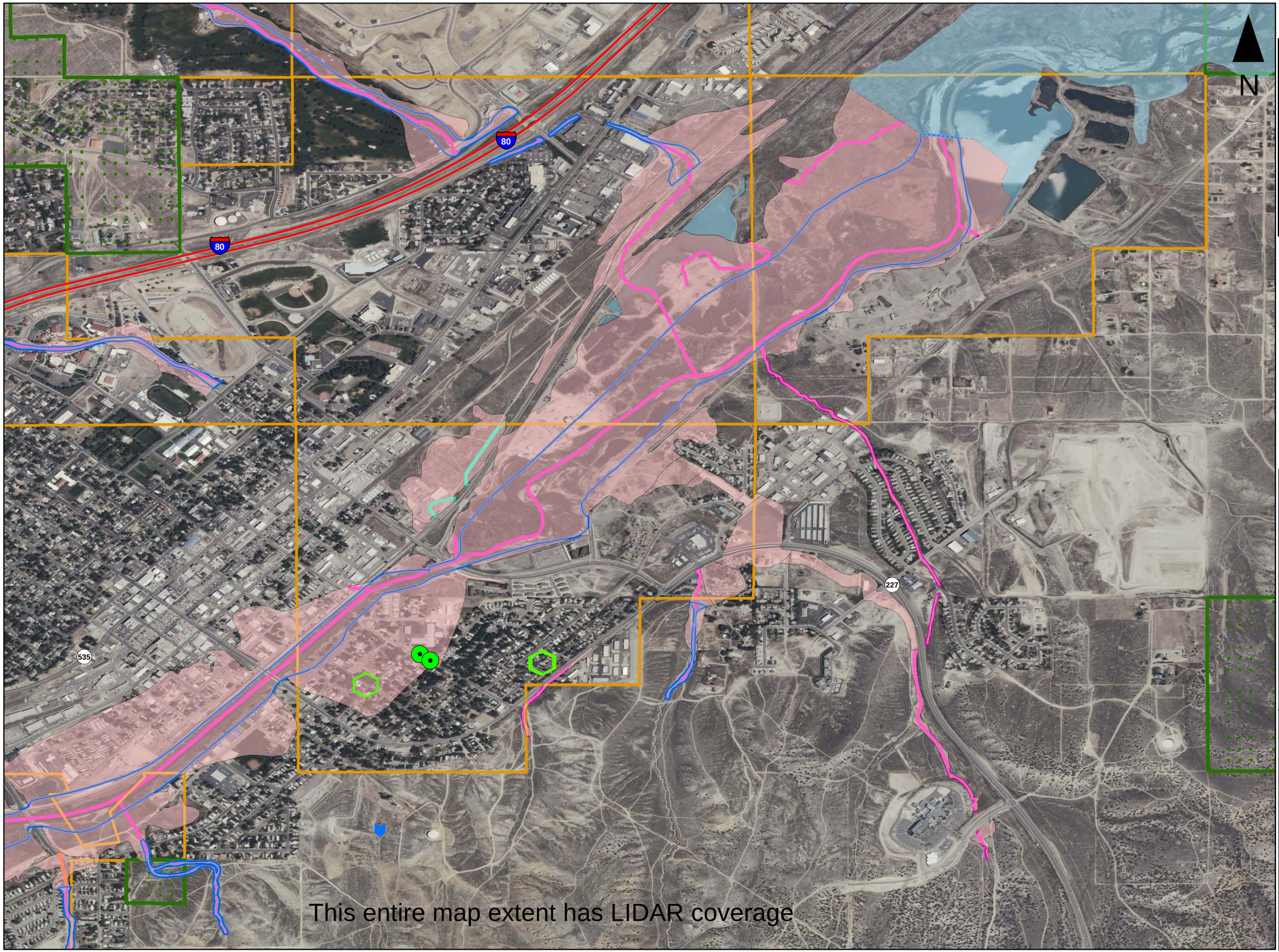
- AE, 6/1/1993
- AO, 6/1/1993

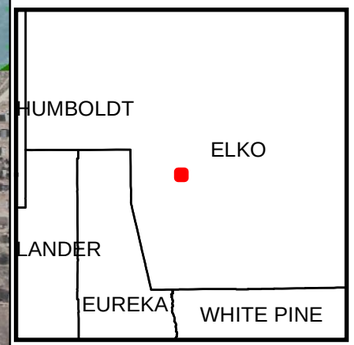
High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways
- Elko State Land
- Elko Fed Land

Study Reach Engineering and Modeling Information	WATER NAME	Eightmile Creek	Humboldt River		22 Middle Drainage	22 Middle Drainage	5th Street Drainage	East Adobe Creek	
	FLOOD ZONE	AE	AE		AE	AO	AE	AE	
	VALIDATION STATUS	VALID	VALID		VALID	VALID	VALID	VALID	
	STATUS TYPE	NVUE COMPLIANT	NVUE COMPLIANT		NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	
	STATUS DATE	2/15/2011	2/15/2011		2/15/2011	2/15/2011	2/15/2011	2/15/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	6/1/1993	6/1/1993		6/1/1993	6/1/1993	6/1/1993	6/1/1993	
	HYDROLOGIC MODEL USED	HEC-1 - 6/1/1993	GAGE ANALYSIS - 6/1/1993		HEC-1	HEC-1	HEC-1	HEC-1	
	HYDRAULIC MODEL USED	HEC-2 - 6/1/1993	HEC-2 - 6/1/1993		HEC-2	HEC-2	HEC-2	HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	YES	YES		YES	YES	YES	UNKNOWN	
	IS MODEL IN HADIGITAL FORMAT?	YES	YES		YES	YES	YES	UNKNOWN	
	CAN HODIGITAL MODEL BE RUN	UNKNOWN	UNKNOWN		UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	
	CAN HADIGITAL MODEL BE RUN	UNKNOWN	UNKNOWN		UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	
	Has there been a major change in gage record since effective analysis?	NO	NO	YES-Gage upstream	NO	NO	NO	NO	
	Is there a significant increse in Period of Record?	NO	NO		NO	NO	NO	NO	
	Is the Model Methodology no longer appropriate?	NO	NO		NO	NO	NO	NO	
	Has there been an addition or removal of a major flood control structure?	NO	NO		NO	NO	NO	NO	
	Is the current channel outside of SFHA?	NO	NO		NO	NO	NO	NO	
	Have there been more than 5 new or removed structures that impact a BFE?	NO	NO		NO	NO	NO	NO	
	Has the channel area changed due to significant fill or scour?	NO	UNKNOWN		NO	NO	NO	NO	
	Does the study use rural regression in urbanized areas?	NO	NO		NO	NO	NO	NO	
	Are there Repetitive losses outside SFHA?	NO	NO		NO	NO	NO	NO	
	Has impervious areas in sub-basin increased > 50%?	NO	NO		NO	NO	NO	NO	
	Has > 1 and < 5 structures been added or removed that impact a BFE?	NO	YES		YES	NO	NO	YES	
	Has there been channel improvements?	NO	NO		NO	NO	NO	NO	
	Is there availability of better topography/bathymetry?	NO	NO		NO	NO	NO	NO	YES - LIDAR avail for the whole area, Elko Project
	Has there been changes to land use or vegetation?	NO	NO		NO	NO	NO	NO	
	Have there been significant storms with HWM's?	NO	NO		NO	NO	NO	NO	
	Are new Regression equatoins available?	NO	NO		NO	NO	NO	NO	
	CE TOTAL	0	0		0	0	0	0	
	SE TOTAL	0	1		1	0	0	1	
	COMMENT								

Elko2





Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

Elko2 CNMS Streams

Zones & Date of Effective Analysis

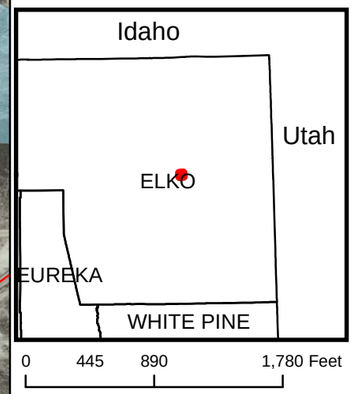
- AE, 6/1/1993
- AH, 6/1/1993
- AO, 6/1/1993

High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways
- Elko State Land
- Elko Fed Land

Study Reach Engineering and Modeling Information	WATER NAME	22 East Drainage North Flow	22 Middle Drainage	Culley's Gulley	Eightmile Creek	Golf Course Drainage	Humboldt River (at Elko)	Metzler Wash	Panorama Wash	22 Middle Drainage	
	FLOOD ZONE	AE	AE	AE	AE	AE	AE	AE	AE	AO	
	VALIDATION STATUS	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	
	STATUS TYPE	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	NVUE COMPLIANT	
	STATUS DATE	2/15/2011	2/15/2011	2/15/2011	2/15/2011	2/15/2011	2/15/2011	2/15/2011	2/15/2011	2/15/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	6/1/1993	6/1/1993	6/1/1993	6/1/1993	6/1/1993	6/1/1993	6/1/1993	6/1/1993	6/1/1993	
	HYDROLOGIC MODEL USED	HEC-1	HEC-1	HEC-1	HEC-1	HEC-1	GAGE ANALYSIS	HEC-1	HEC-1	HEC-1	
	HYDRAULIC MODEL USED	HEC-2	HEC-2	HEC-2	HEC-2	HEC-2	HEC-2	HEC-2	HEC-2	HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	YES	YES	YES	YES	YES	YES	YES	YES	YES	
	IS MODEL IN HADIGITAL FORMAT?	YES	YES	YES	YES	YES	YES	YES	YES	YES	
	CAN HODIGITAL MODEL BE RUN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	
	CAN HADIGITAL MODEL BE RUN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	
Has there been a major change in gage record since effective analysis?		NO	NO	NO	NO	NO	NO	NO	NO	NO	
Is there a significant increase in Period of Record?		NO	NO	NO	NO	NO	NO	NO	NO	NO	
Is the Model Methodology no longer appropriate ?		NO	NO	NO	NO	NO	NO	NO	NO	NO	
Has there been an addition or removal of a major flood control structure ?		NO	NO	NO	NO	NO	NO	NO	NO	NO	
Is the current Channel outside of SFHA?		NO	NO	NO	NO	NO	NO	NO	NO	NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO	NO	NO	NO	NO	NO	NO	NO	NO	
Has the channel area changed due to significant fill or scour ?		NO	NO	NO	NO	NO	UNKNOWN	NO	NO	NO	
Does this study use rural regression in urbanized areas?		NO	NO	NO	NO	NO	NO	NO	NO	NO	
Are there Repetitive losses outside SFHA?		NO	NO	NO	NO	NO	NO	NO	NO	NO	
Has impervious areas in sub-basin increased > 50% ?		NO	NO	NO	NO	NO	NO	NO	NO	NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO	YES	YES	NO	NO	YES	NO	NO	NO	
Has there been channel improvements?		NO	NO	NO	NO	NO	NO	NO	NO	NO	
Is there the availability of better topography/bathymetry?		NO	NO	NO	NO	NO	NO	NO	NO	NO	YES LIDAR avail for the whole area - Elko Project
Has there been changes to land use or vegetation?		NO	NO	NO	NO	NO	NO	NO	NO	NO	
Have there been significant storms with HWM's?		NO	NO	NO	NO	NO	NO	NO	NO	NO	
Are new Regression equations available?		NO	NO	NO	NO	NO	NO	NO	NO	NO	
	CE TOTAL	0	0	0	0	0	0	0	0	0	
	SE TOTAL	0	1	1	0	0	1	0	0	0	
	COMMENT										

Wells



Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Wells CNMS Streams

Zones & Date of Effective Analysis

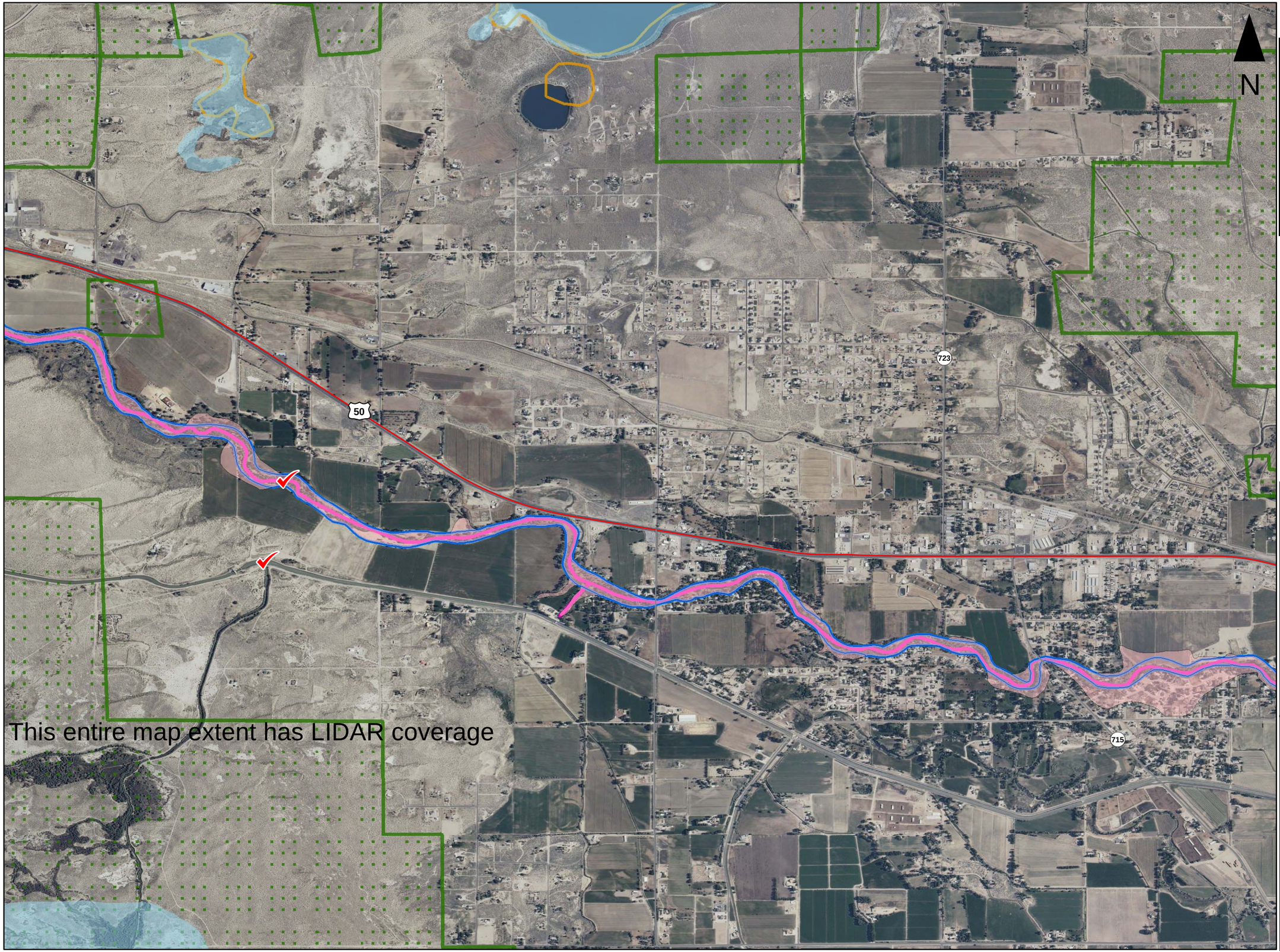
- AE, 10/1/1989
- AE, 9/1/1990

High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways
- Wells Fed Land
- Wells State Land

Study Reach Engineering and Modeling Information					
	WATER NAME	**Woodhills Drain (at Elko County)**		**Woodhills Drain (at Wells)**	
	FLOOD ZONE	AE		AE	
	VALIDATION STATUS	VALID		UNVERIFIED	
	STATUS TYPE	NVUE COMPLIANT		TO BE STUDIED	
	STATUS DATE	2/15/2011		2/15/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	9/1/1990		10/1/1989	
	HYDROLOGIC MODEL USED	OTHER		OTHER	
	HYDRAULIC MODEL USED	WSPRO (JUNE 1988)		WSPRO (JUNE 1988)	
	IS MODEL IN HODIGITAL FORMAT?	NO		NO	
	IS MODEL IN HADIGITAL FORMAT?	NO		NO	
	CAN HODIGITAL MODEL BE RUN	UNKNOWN		UNKNOWN	
	CAN HADIGITAL MODEL BE RUN	UNKNOWN		UNKNOWN	
Has there been a major change in gage record since effective analysis?		NO		NO	
Is there a significant increase in Period of Record?		NO		NO	
Is the Model Methodology no longer appropriate ?		NO		NO	
Has there been an addition or removal of a major flood control structure**?**		NO		NO	
Is the current Channel outside of SFHA?		NO		NO	
Have there been more than 5 new or removed structures that impact a B**FE?**		NO		YES	
Has the channel area changed due to significant fill or scour ?		NO		NO	
Does this study use rural regression in urbanized areas?		NO		NO	
Are there Repetitive losses outside SFHA?		NO		NO	
Has impervious areas in sub-basin increased > 50% ?		NO		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO		YES	
Has there been channel improvements?		NO		NO	
Is there the availability of better topography/bathymetry?		NO		NO	
Has there been changes to land use or vegetation?		NO		NO	
Have there been significant storms with HWM's?		NO		NO	
Are new Regression equations available?		NO		NO	
	CE TOTAL	0		1	
	SE TOTAL	0		1	
	COMMENT				

Fallon1



Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

Fallon1 CNMS Streams

Zone & Date of Effective Analysis

- AE, 5/1/1984

High Hazard Flooding Areas

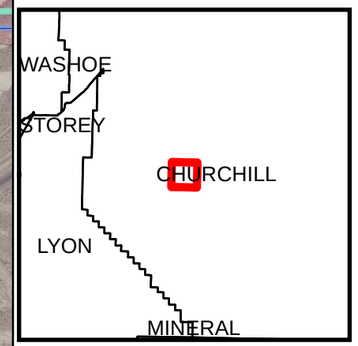
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information			
	WATER NAME	**CARSON RIVER**	
	FLOOD ZONE	AE	
	VALIDATION STATUS	UNVERIFIED	
	STATUS TYPE	TO BE STUDIED	
	SOURCE	RFHL	
	STATUS DATE	3/30/2012	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	5/1/1984	
	HYDROLOGIC MODEL USED	PEAKFQ	
	HYDRAULIC MODEL USED	HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	NO	
	IS MODEL IN HADIGITAL FORMAT?	NO	
	CAN HODIGITAL MODEL BE RUN	NO	
	CAN HADIGITAL MODEL BE RUN	NO	
Has there been a major change in gage record since effective analysis?		NO	
Is there a significant increase in Period of Record?		NO	
Is the Model Methodology no longer appropriate ?		NO	
Has there been an addition or removal of a major flood control structure ?		NO	
Is the current Channel outside of SFHA?		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO	
Has the channel area changed due to significant fill or scour ?		YES	
Does this study use rural regression in urbanized areas?		NO	
Are there Repetitive losses outside SFHA?		NO	
Has impervious areas in sub-basin increased > 50% ?		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		YES	
Has there been channel improvements?		NO	
Is there the availability of better topography/bathymetry?		NO	YES-LIDAR, Newlands project
Has there been changes to land use or vegetation?		NO	
Have there been significant storms with HWM's?		NO	
Are new Regression equations available?		NO	
	CE TOTAL	2	
	SE TOTAL	1	
	COMMENT	Hydro: Log Pearson III (gage 10312000)	

Fallon2



0 900 1,800 3,600 Feet

N

726

95

50

95

117

118

115

This entire map extent has LIDAR coveage

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

Fallon2 CNMS Streams

Zone & Date of Effective Analysis

- AE, 1/7/1999
- AE, 4/1/1992
- AE, 5/1/1984

High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information							
	WATER NAME	**CARSON RIVER**		**NEW RIVER DRAIN**		**CARSON RIVER**	
	FLOOD ZONE	AE		AE		AE	
	VALIDATION STATUS	UNVERIFIED		UNVERIFIED		UNVERIFIED	
	STATUS TYPE	TO BE STUDIED		TO BE STUDIED		TO BE STUDIED	
	STATUS DATE	3/30/2012		3/30/2012		3/30/2012	
	STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	4/1/1992		1/7/1999		5/1/1984	
	HYDROLOGIC MODEL USED	OTHER		OTHER		PEAKFQ	
	HYDRAULIC MODEL USED	WSPRO		WSPRO		HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	NO		NO		NO	
	IS MODEL IN HADIGITAL FORMAT?	NO		YES		NO	
	CAN HODIGITAL MODEL BE RUN	NO		NO		NO	
	CAN HADIGITAL MODEL BE RUN	NO		UKNOWN		NO	
Has there been a major change in gage record since effective analysis?		NO		NO		NO	
Is there a significant increase in Period of Record?		NO		NO		NO	
Is the Model Methodology no longer appropriate ?		YES		YES		NO	
Has there been an addition or removal of a major flood control structure ?		NO		NO		NO	
Is the current Channel outside of SFHA?		NO		YES		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO		YES		NO	
Has the channel area changed due to significant fill or scour ?		NO		NO		NO	
Does this study use rural regression in urbanized areas?		NO		NO		NO	
Are there Repetitive losses outside SFHA?		NO		NO		NO	
Has impervious areas in sub-basin increased > 50% ?		NO		NO		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		11		NO		NO	
Has there been channel improvements?		YES		YES		NO	
Is there the availability of better topography/bathymetry?		NO	YES-LIDAR Newlands Project	NO	YES-LIDAR Newlands Project	NO	YES-LIDAR Newlands Project
Has there been changes to land use or vegetation?		NO		NO		NO	
Have there been significant storms with HWM's?		NO		NO		NO	
Are new Regression equations available?		NO		NO		NO	
	CE TOTAL	1		3		1	
	SE TOTAL	1		1		0	
	COMMENT	Hydro: Engineer Calculation: subtracting the diversion capacity of the T&V canals from the assumed 1% chance of occurrence flood flow fro Lahontan Reservoir		Hydro: Estimated by Engineer		Hydro: Log Pearson III (gage 10312000)	

Dayton1 73

0 800 1,600 3,200 Feet

N

50

822

This entire map extent has LIDAR coverage

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

Dayton1 CNMS Streams

Zones & Date of Effective Analysis

- AE, 10/16/1990
- AE, 11/20/1998
- AE, Unknown Date

High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information					
	WATER NAME	**ELDORADO CANYON**		**CARSON RIVER**	
	FLOOD ZONE	AE		AE	
	VALIDATION STATUS	UNVERIFIED		UNVERIFIED	
	STATUS TYPE	TO BE STUDIED		BEING STUDIED	
	STATUS DATE	3/30/2012		3/30/2012	
	STUDY TYPE	DIGITAL CONVERSION DETAILED		NEW DETAILED	
	DATE OF EFFECTIVE ANALYSIS	10/16/1990		UNKNOWN	
	HYDROLOGIC MODEL USED	HEC-1		GAGE ANALYSIS	
	HYDRAULIC MODEL USED	HEC-2		HEC-RAS	
	IS MODEL IN HODIGITAL FORMAT?	YES		UKNOWN	
	IS MODEL IN HADIGITAL FORMAT?	NO		NO	
	CAN HODIGITAL MODEL BE RUN	YES		UKNOWN	
	CAN HADIGITAL MODEL BE RUN	NO		NO	
Has there been a major change in gage record since effective analysis?		NO		NO	Gage upstream
Is there a significant increase in Period of Record?		NO		NO	UKNOWN
Is the Model Methodology no longer appropriate ?		NO		NO	
Has there been an addition or removal of a major flood control structure ?		UKNOWN		NO	
Is the current Channel outside of SFHA?		YES		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		YES		NO	
Has the channel area changed due to significant fill or scour ?		NO		NO	
Does this study use rural regression in urbanized areas?		NO		NO	
Are there Repetitive losses outside SFHA?		NO		NO	
Has impervious areas in sub-basin increased > 50% ?		NO		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO		NO	
Has there been channel improvements?		YES		NO	
Is there the availability of better topography/bathymetry?		NO	YES- LIDAR, Carson River Watershed Project	NO	YES- LIDAR, Carson River Watershed Project
Has there been changes to land use or vegetation?		YES		NO	
Have there been significant storms with HWM's?		NO		NO	
Are new Regression equations available?		NO		NO	
	CE TOTAL	2		0	
	SE TOTAL	3		0	
	COMMENT			INVALID - BEING STUDIED	

Dayton2 75

Most of this map extent has LIDAR coverage

N

0 800 1,600 3,200 Feet

50

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

Dayton2 CNMS Streams

Zone & Date of Effective Analysis

- AE, Unknown Date
- AO, 11/1/1990
- AO, Unknown Date

High Hazard Flooding Areas

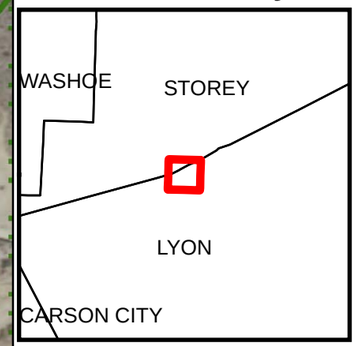
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information					
	WATER NAME	**CARSON RIVER**		**SIXMILE CANYON**	
	FLOOD ZONE	AO		AO	
	VALIDATION STATUS	UNVERIFIED		VALID	
	STATUS TYPE	BEING STUDIED		NVUE COMPLIANT	
	STATUS DATE	3/30/2012		3/30/2012	
	STUDY TYPE	NEW DETAILED		DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	No Date		11/1/1990	
	HYDROLOGIC MODEL USED	GAGE ANALYSIS		HEC-1	
	HYDRAULIC MODEL USED	HEC-RAS		OTHER	
	IS MODEL IN HODIGITAL FORMAT?	UNKNOWN		NO	
	IS MODEL IN HADIGITAL FORMAT?	NO		NO	
	CAN HODIGITAL MODEL BE RUN	UNKNOWN		NO	
	CAN HADIGITAL MODEL BE RUN	NO		NO	
Has there been a major change in gage record since effective analysis?		NO		NO	
Is there a significant increase in Period of Record?		NO		NO	
Is the Model Methodology no longer appropriate ?		NO		NO	
Has there been an addition or removal of a major flood control structure ?		NO		NO	
Is the current Channel outside of SFHA?		NO		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO		NO	
Has the channel area changed due to significant fill or scour ?		NO		NO	
Does this study use rural regression in urbanized areas?		NO		NO	
Are there Repetitive losses outside SFHA?		NO		NO	
Has impervious areas in sub-basin increased > 50% ?		NO		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO		NO	
Has there been channel improvements?		NO		NO	
Is there the availability of better topography/bathymetry?		NO	YES- LIDAR, Carson River Watershed Project	YES	YES- LIDAR, Carson River Watershed Project
Has there been changes to land use or vegetation?		NO		YES	
Have there been significant storms with HWM's?		NO		NO	
Are new Regression equations available?		NO		NO	
	CE TOTAL	0		0	
	SE TOTAL	0		2	
	COMMENT	INVALID - BEING STUDIED		Explicit Hydra_Mdl = FEMA G&S Alluvial Fan Method 1985	

Silver City 77



Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Silver City CNMS Streams

Zone & Date of Effective Analysis

- AE, 11/20/1998

High Hazard Flooding Areas

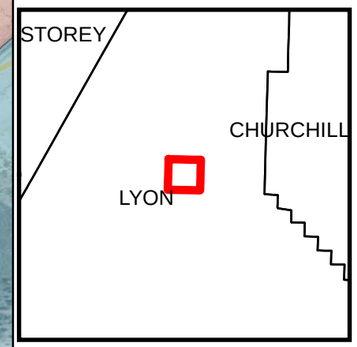
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information			
	WATER NAME	**GOLD CANYON CREEK**	
	FLOOD ZONE	AE	
	VALIDATION STATUS	UNVERIFIED	
	STATUS TYPE	TO BE STUDIED	
	STATUS DATE	3/30/2012	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	11/20/1998	
	HYDROLOGIC MODEL USED	OTHER	
	HYDRAULIC MODEL USED	HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	NO	
	IS MODEL IN HADIGITAL FORMAT?	NO	
	CAN HODIGITAL MODEL BE RUN	NO	
	CAN HADIGITAL MODEL BE RUN	NO	
Has there been a major change in gage record since effective analysis?		NO	
Is there a significant increase in Period of Record?		NO	
Is the Model Methodology no longer appropriate ?		NO	
Has there been an addition or removal of a major flood control structure ?		NO	
Is the current Channel outside of SFHA?		YES	
Have there been more than 5 new or removed structures that impact a BFE ?		NO	
Has the channel area changed due to significant fill or scour ?		NO	
Does this study use rural regression in urbanized areas?		NO	
Are there Repetitive losses outside SFHA?		NO	
Has impervious areas in sub-basin increased > 50% ?		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		YES	
Has there been channel improvements?		NO	
Is there the availability of better topography/bathymetry?		YES	
Has there been changes to land use or vegetation?		YES	
Have there been significant storms with HWM's?		NO	
Are new Regression equations available?		NO	
	CE TOTAL	1	
	SE TOTAL	3	
	COMMENT	Explicit Hydro_Mdl = NRCS Rainfall-Runoff Comp. Model	

Silver Springs 79



0 485 970 1,940 Feet

N

50

95

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Silver Springs CNMS Streams

Zone & Effective Date of Analysis

- AE, 4/18/1991

High Hazard Flooding Areas

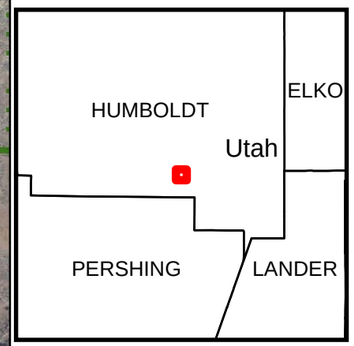
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information			
	WATER NAME	**UNNAMED WASH AT SILVER SPRINGS**	
	FLOOD ZONE	AE	
	VALIDATION STATUS	VALID	
	STATUS TYPE	NVUE COMPLIANT	
	STATUS DATE	3/30/2012	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	4/18/1991	
	HYDROLOGIC MODEL USED	HEC-1	
	HYDRAULIC MODEL USED	OTHER	
	IS MODEL IN HODIGITAL FORMAT?	YES	
	IS MODEL IN HADIGITAL FORMAT?	NO	
	CAN HODIGITAL MODEL BE RUN	YES	
	CAN HADIGITAL MODEL BE RUN	NO	
Has there been a major change in gage record since effective analysis?		NO	
Is there a significant increase in Period of Record?		NO	
Is the Model Methodology no longer appropriate ?		NO	
Has there been an addition or removal of a major flood control structure ?		NO	
Is the current Channel outside of SFHA?		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO	
Has the channel area changed due to significant fill or scour ?		NO	
Does this study use rural regression in urbanized areas?		NO	
Are there Repetitive losses outside SFHA?		NO	
Has impervious areas in sub-basin increased > 50% ?		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO	
Has there been channel improvements?		NO	
Is there the availability of better topography/bathymetry?		NO	
Has there been changes to land use or vegetation?		NO	
Have there been significant storms with HWM's?		NO	
Are new Regression equations available?		NO	
	CE TOTAL	0	
	SE TOTAL	0	
	COMMENT		

Winnemucca 81



0 800 1,600 3,200 Feet

N

795
95
289
794
80
787
294
80

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Winnemucca CNMS Streams

Detailed Studied Zone

- AE

High Hazard Flooding Areas

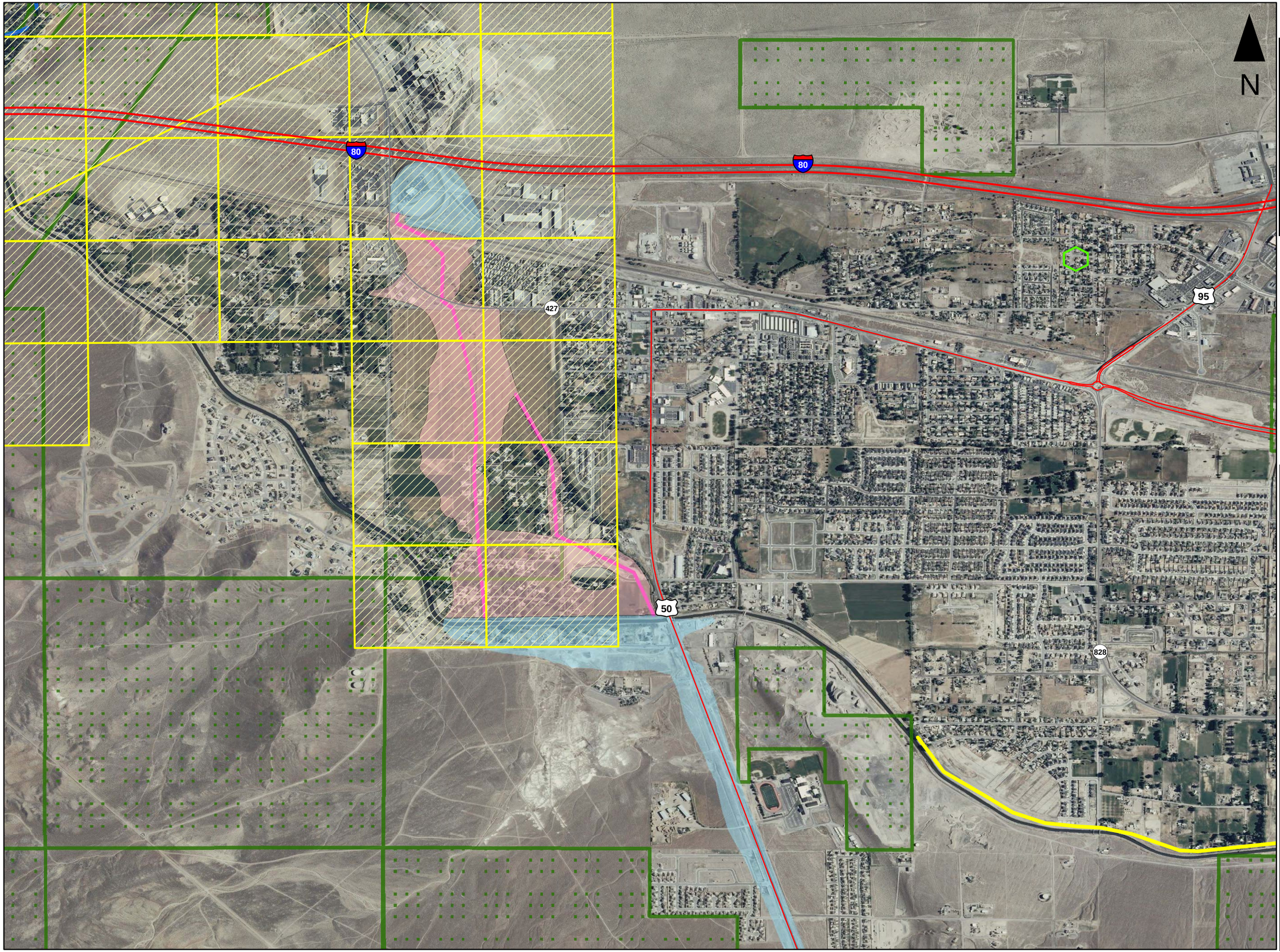
- Zone A (Approx)
- Detailed Studies
- Floodways

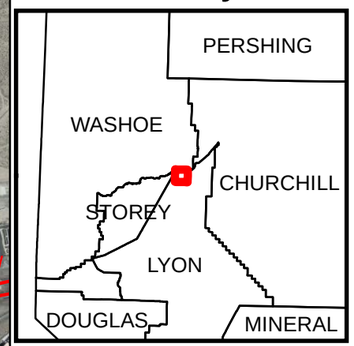
Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information			
	WATER NAME	**Unknown (by North Channel)**	
	FLOOD ZONE	AO	
	VALIDATION STATUS	UNVERIFIED	
	STATUS TYPE	TO BE STUDIED	
	STATUS DATE	2/15/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	5/1/1997	
	HYDROLOGIC MODEL USED	HEC-1	
	HYDRAULIC MODEL USED	Not Modeled	
	IS MODEL IN HODIGITAL FORMAT?	UNKNOWN	
	IS MODEL IN HADIGITAL FORMAT?	UNKNOWN	
	CAN HODIGITAL MODEL BE RUN	UNKNOWN	
	CAN HADIGITAL MODEL BE RUN	UNKNOWN	
Has there been a major change in gage record since effective		NO	
Is there a significant increase in Period of Record?		NO	
Is the Model Methodology no longer appropriate ?		YES	
Has there been an addition or removal of a major flood contr		NO	
Is the current Channel outside of SFHA?		NO	
Have there been more than 5 new or removed structures that		NO	
Has the channel area changed due to significant fill or scour		NO	
Does this study use rural regression in urbanized areas?		NO	
Are there Repetitive losses outside SFHA?		NO	
Has impervious areas in sub-basin increased > 50% ?		NO	
Has > 1 and < 5 structures been added or removed that impa		NO	
Has there been channel improvements?		NO	
Is there the availability of better topography/bathymetry?		NO	
Has there been changes to land use or vegetation?		NO	
Have there been significant storms with HWM's?		NO	
Are new Regression equations available?		NO	
	CE TOTAL	1	
	SE TOTAL	0	
	COMMENT		

Fernley1





Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Fernley1 CNMS Streams

Zone & Date of Effective Analysis

- AE, 11/20/1998

High Hazard Flooding Areas

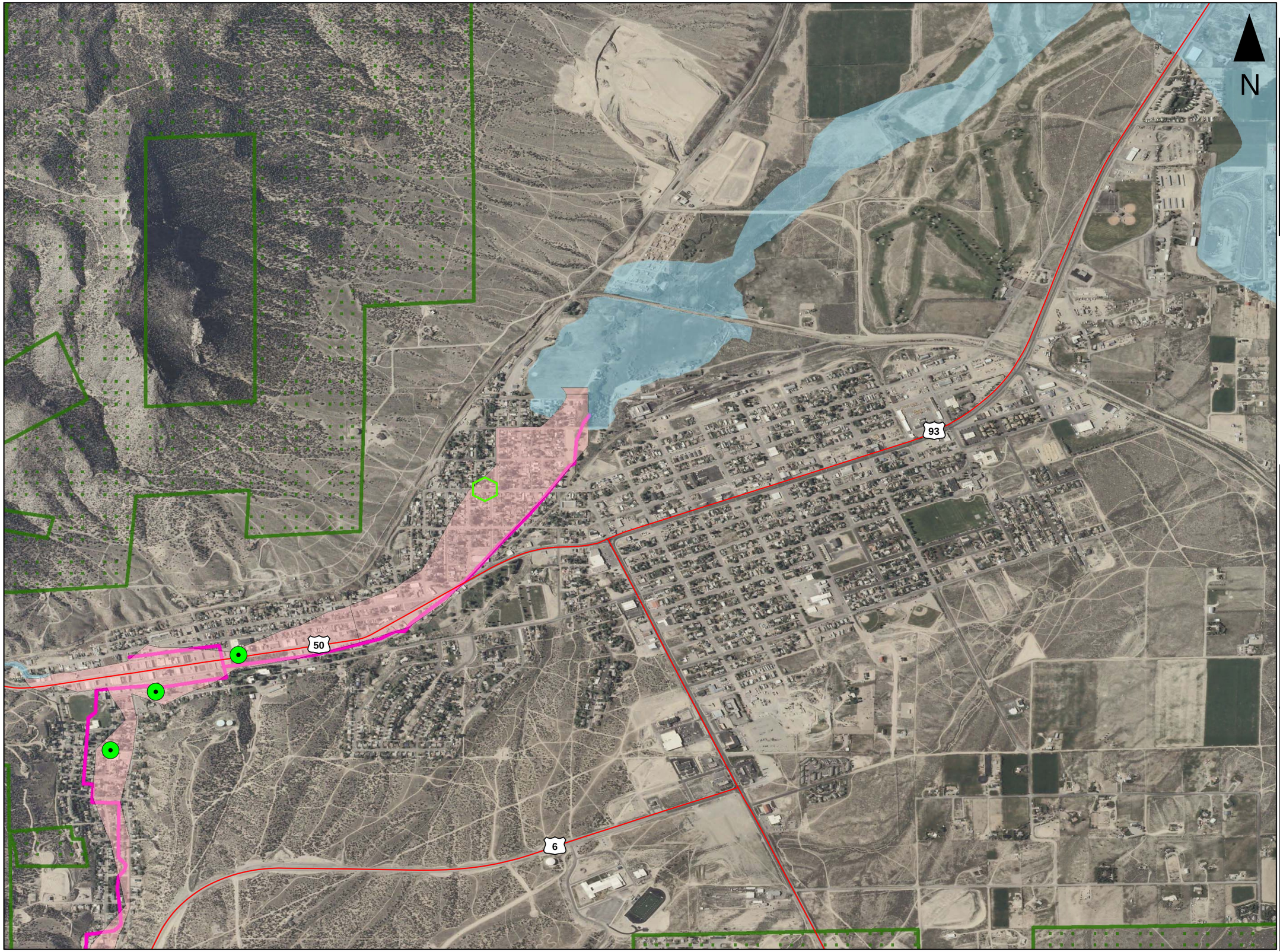
- Zone A (Approx)
- Detailed Studies
- Floodways

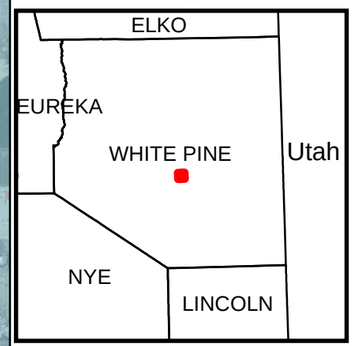
Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	**OVERFLOW AREA NORTH OF TRUCKEE CANAL (UNNAMED DITCH)**	
	FLOOD ZONE	AE	
	VALIDATION STATUS	VALID	
	STATUS TYPE	NVUE COMPLIANT	
	STATUS DATE	3/30/2012	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	11/20/1998	
	HYDROLOGIC MODEL USED	OTHER	
	HYDRAULIC MODEL USED	WSPRO	
	IS MODEL IN HODIGITAL FORMAT?	YES	
	IS MODEL IN HADIGITAL FORMAT?	YES	
	CAN HODIGITAL MODEL BE RUN	YES	
	CAN HADIGITAL MODEL BE RUN	UNKNOWN	
Has there been a major change in gage record since effective analysis?		NO	
Is there a significant increase in Period of Record?		NO	
Is the Model Methodology no longer appropriate ?		NO	
Has there been an addition or removal of a major flood control structure ?		NO	
Is the current Channel outside of SFHA?		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO	
Has the channel area changed due to significant fill or scour ?		NO	
Does this study use rural regression in urbanized areas?		NO	
Are there Repetitive losses outside SFHA?		NO	
Has impervious areas in sub-basin increased > 50% ?		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO	
Has there been channel improvements?		NO	
Is there the availability of better topography/bathymetry?		NO	
Has there been changes to land use or vegetation?		NO	
Have there been significant storms with HWM's?		NO	
Are new Regression equations available?		NO	
	CE TOTAL	0	
	SE TOTAL	0	
	COMMENT	Explicit Hydro_Mdl = NRCS Rainfall-Runoff Comp. Model	

Ely





Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Ely CNMS Streams

Zone & Date of Effective Analysis

- AO, 3/15/1983

High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	Murry Creek		Gleason Creek	
	FLOOD ZONE	AO		AO	
	VALIDATION STATUS	VALID		VALID	
	STATUS TYPE	NVUE COMPLIANT		NVUE COMPLIANT	
	STATUS DATE	4/8/2010		4/8/2010	
	STUDY TYPE	Digital Conversion Detailed		Digital Conversion Detailed	
	DATE OF EFFECTIVE ANALYSIS	3/15/1983		3/15/1983	
	HYDROLOGIC MODEL USED	OTHER		OTHER	
	HYDRAULIC MODEL USED	OTHER		OTHER	
	IS MODEL IN HODIGITAL FORMAT?	NO		NO	
	IS MODEL IN HADIGITAL FORMAT?	NO		NO	
	CAN HODIGITAL MODEL BE RUN	NO		NO	
	CAN HADIGITAL MODEL BE RUN	NO		NO	
Has there been a major change in gage record since effective analysis?		No gage analysis		No gage analysis	
Is there a significant increase in Period of Record?		NO		NO	
Is the Model Methodology no longer appropriate ?		UNKNOWN		UNKNOWN	
Has there been an addition or removal of a major flood control structure ?		UNKNOWN		UNKNOWN	
Is the current Channel outside of SFHA?		UNKNOWN		UNKNOWN	
Have there been more than 5 new or removed structures that impact a BFE ?		UNKNOWN		UNKNOWN	
Has the channel area changed due to significant fill or scour ?		UNKNOWN		UNKNOWN	
Does this study use rural regression in urbanized areas?		UNKNOWN		UNKNOWN	
Are there Repetitive losses outside SFHA?		UNKNOWN		UNKNOWN	
Has impervious areas in sub-basin increased > 50% ?		UNKNOWN		UNKNOWN	
Has > 1 and < 5 structures been added or removed that impact a BFE?		UNKNOWN		UNKNOWN	
Has there been channel improvements?		UNKNOWN		UNKNOWN	
Is there the availability of better topography/bathymetry?		NO		NO	
Has there been changes to land use or vegetation?		UNKNOWN		UNKNOWN	
Have there been significant storms with HWM's?		UNKNOWN		UNKNOWN	
Are new Regression equations available?		UNKNOWN		UNKNOWN	

CE TOTAL	
SE TOTAL	
COMMENT	

This entire map extent has LIDAR coverage

N

827

339

Mason

0 265 530 1,060 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

Mason CNMS Streams

Zone & Date of Effective Analysis

- AE, No Date

High Hazard Flooding Areas

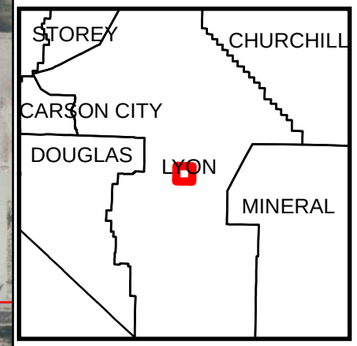
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information			
	WATER NAME	**WALKER RIVER**	
	FLOOD ZONE	AE	
	VALIDATION STATUS	UNVERIFIED	
	STATUS TYPE	BEING STUDIED	
	STATUS DATE	3/30/2012	
	STUDY TYPE	NEW DETAILED	
	DATE OF EFFECTIVE ANALYSIS	UNKNOWN	
	HYDROLOGIC MODEL USED	UNKNOWN	
	HYDRAULIC MODEL USED	OTHER	
	IS MODEL IN HODIGITAL FORMAT?	UNKNOWN	
	IS MODEL IN HADIGITAL FORMAT?	No	
	CAN HODIGITAL MODEL BE RUN	UNKNOWN	
	CAN HADIGITAL MODEL BE RUN	No	
Has there been a major change in gage record since effective analysis?		No	
Is there a significant increase in Period of Record?		No	
Is the Model Methodology no longer appropriate ?		No	
Has there been an addition or removal of a major flood control structure ?		No	
Is the current Channel outside of SFHA?		No	
Have there been more than 5 new or removed structures that impact a BFE ?		No	
Has the channel area changed due to significant fill or scour ?		No	
Does this study use rural regression in urbanized areas?		No	
Are there Repetitive losses outside SFHA?		No	
Has impervious areas in sub-basin increased > 50% ?		No	
Has > 1 and < 5 structures been added or removed that impact a BFE?		No	
Has there been channel improvements?		No	
Is there the availability of better topography/bathymetry?		No	
Has there been changes to land use or vegetation?		No	
Have there been significant storms with HWM's?		No	
Are new Regression equations available?		No	
	CE TOTAL	0	
	SE TOTAL	0	
	COMMENT	INVALID - BEING STUDIED	

Yerington 89



0 625 1,250 2,500 Feet

N

95

340

339

208

This entire map extent has LIDAR coverage

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees

Yerington CNMS Streams

Zone & Date of Effective Analysis

- AE, Unknown Date

High Hazard Flooding Areas

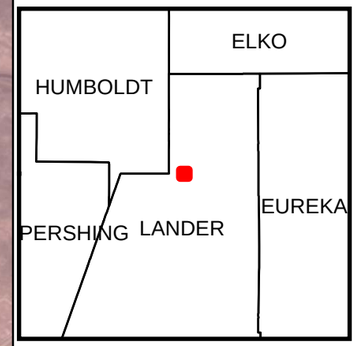
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information			
	WATER NAME	**WALKER RIVER**	
	FLOOD ZONE	AE	
	VALIDATION STATUS	UNVERIFIED	
	STATUS TYPE	BEING STUDIED	
	STATUS DATE	3/30/2012	
	STUDY TYPE	NEW DETAILED	
	DATE OF EFFECTIVE ANALYSIS	No Date	
	HYDROLOGIC MODEL USED	UNKNOWN	
	HYDRAULIC MODEL USED	OTHER	
	IS MODEL IN HODIGITAL FORMAT?	UNKNOWN	
	IS MODEL IN HADIGITAL FORMAT?	NO	
	CAN HODIGITAL MODEL BE RUN	UNKNOWN	
	CAN HADIGITAL MODEL BE RUN	NO	
Has there been a major change in gage record since effective analysis?		NO	
Is there a significant increase in Period of Record?		NO	
Is the Model Methodology no longer appropriate ?		NO	
Has there been an addition or removal of a major flood control structure ?		NO	
Is the current Channel outside of SFHA?		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO	
Has the channel area changed due to significant fill or scour ?		NO	
Does this study use rural regression in urbanized areas?		NO	
Are there Repetitive losses outside SFHA?		NO	
Has impervious areas in sub-basin increased > 50% ?		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO	
Has there been channel improvements?		NO	
Is there the availability of better topography/bathymetry?		NO	YES- LIDAR
Has there been changes to land use or vegetation?		NO	
Have there been significant storms with HWM's?		NO	
Are new Regression equations available?		NO	
	CE TOTAL	0	
	SE TOTAL	0	
	COMMENT	INVALID - BEING STUDIED	

BattleMountain 91



N

304

806

80

305

80

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Battle Mtn CNMS Streams

Zones & Date of Effective Analysis

- AE, 5/1/1986
- AE, 5/15/2011

High Hazard Flooding Areas

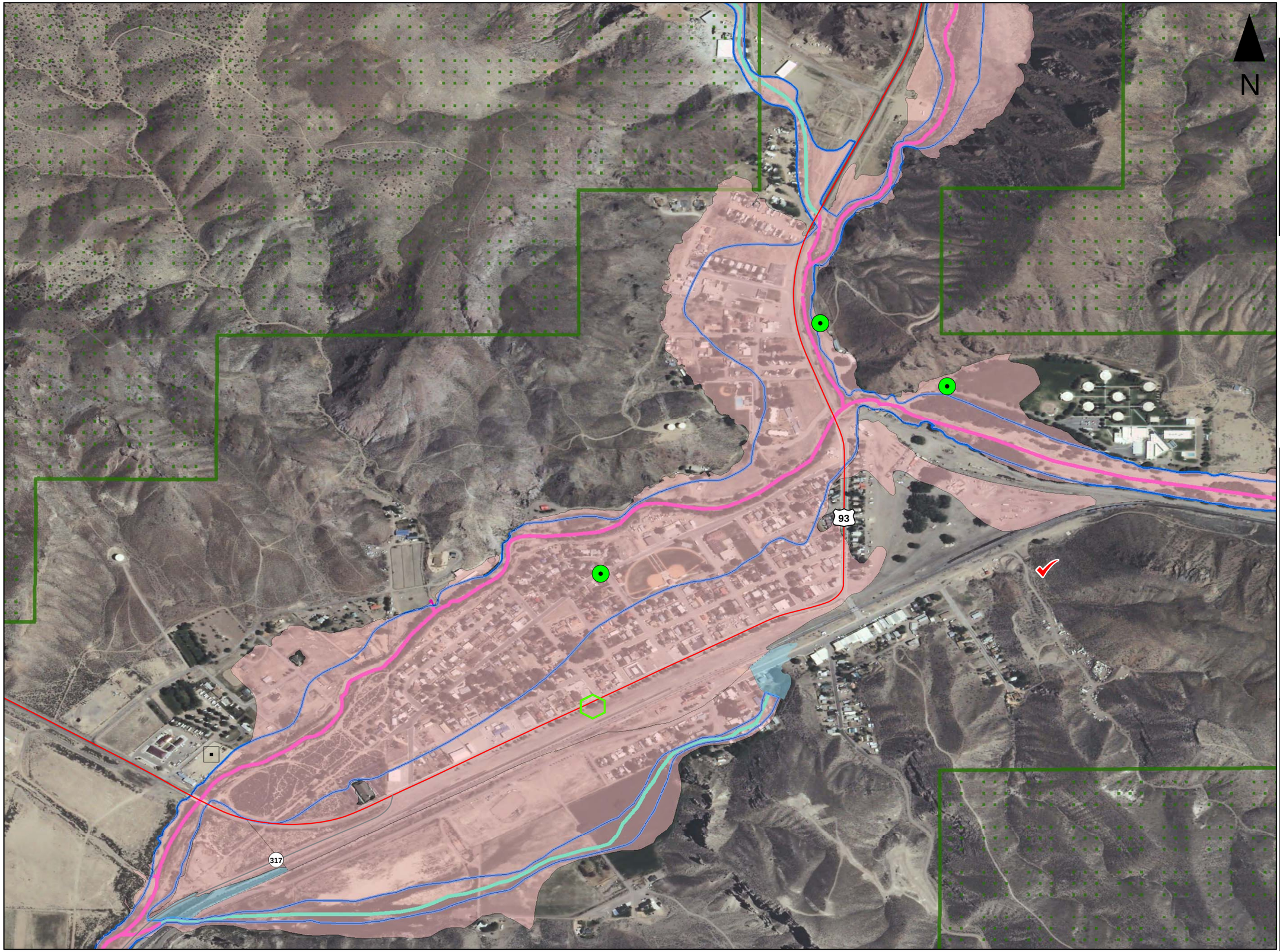
- Zone A (Approx)
- Detailed Studies
- Floodways

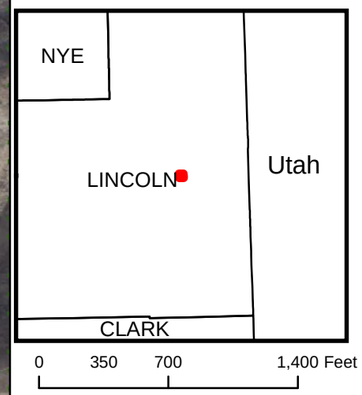
Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information					
	WATER NAME	**REESE / HUMBOLDT RIVER**		**REESE RIVER**	
	FLOOD ZONE	AE		AE	
	VALIDATION STATUS	VALID		VALID	
	STATUS TYPE	NVUE COMPLIANT		NVUE COMPLIANT	
	STATUS DATE	4/8/2010		4/8/2010	
	STUDY TYPE	Digital Conversion Detailed		Digital Conversion Detailed	
	DATE OF EFFECTIVE ANALYSIS	05/01/86		05/01/86	
	HYDROLOGIC MODEL USED	Regression Equations		Regression Equations	
	HYDRAULIC MODEL USED	HEC-2		HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	NO		NO	
	IS MODEL IN HADIGITAL FORMAT?	NO		NO	
	CAN HODIGITAL MODEL BE RUN	NO		NO	
	CAN HADIGITAL MODEL BE RUN	NO		NO	
Has there been a major change in gage record since effective analysis?		NO		NO	
Is there a significant increase in Period of Record?		NO		NO	
Is the Model Methodology no longer appropriate ?		NO		NO	
Has there been an addition or removal of a major flood control structure ?		UNKNOWN		UNKNOWN	
Is the current Channel outside of SFHA?		UNKNOWN		UNKNOWN	
Have there been more than 5 new or removed structures that impact a BFE ?		UNKNOWN		UNKNOWN	
Has the channel area changed due to significant fill or scour ?		UNKNOWN		UNKNOWN	
Does this study use rural regression in urbanized areas?		UNKNOWN		UNKNOWN	
Are there Repetitive losses outside SFHA?		UNKNOWN		UNKNOWN	
Has impervious areas in sub-basin increased > 50% ?		UNKNOWN		UNKNOWN	
Has > 1 and < 5 structures been added or removed that impact a BFE?		UNKNOWN		UNKNOWN	
Has there been channel improvements?		UNKNOWN		UNKNOWN	
Is there the availability of better topography/bathymetry?		UNKNOWN		UNKNOWN	
Has there been changes to land use or vegetation?		UNKNOWN		UNKNOWN	
Have there been significant storms with HWM's?		UNKNOWN		UNKNOWN	
Are new Regression equations available?		UNKNOWN		UNKNOWN	
	CE TOTAL				
	SE TOTAL				
	COMMENT				

Caliente





Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

Caliente CNMS Streams

Zones & Date of Effective Analysis

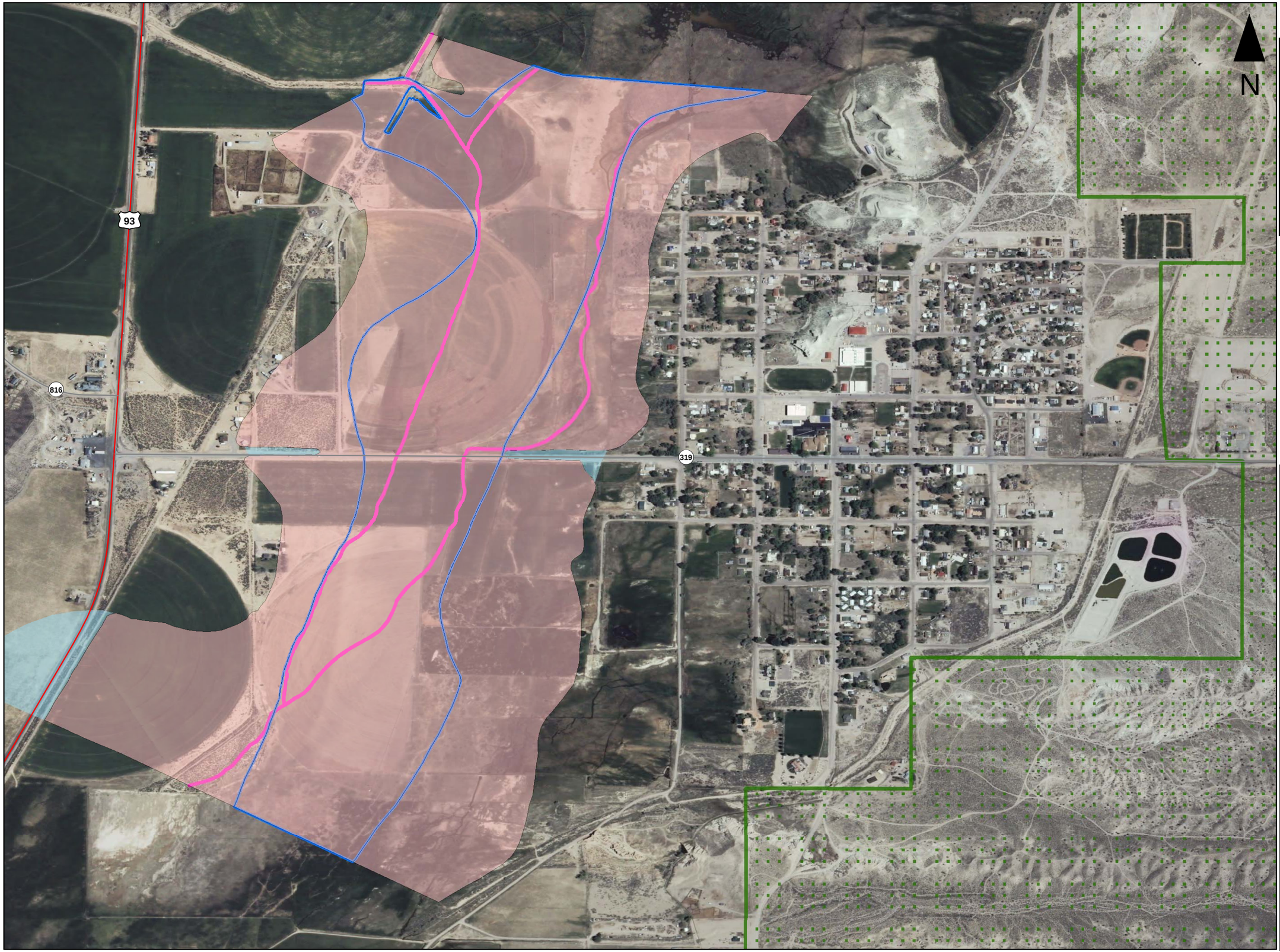
- AE, 3/1/2009
- AE, 7/1/1980

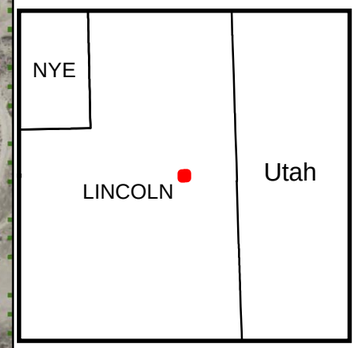
Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	Meadow Valley Wash		Antelope Canyon Wash		Dry Wash Runoff	
	FLOOD ZONE	AE		AE		AE	
	VALIDATION STATUS	VALID		VALID		VALID	
	STATUS TYPE	NVUE COMPLIANT		NVUE COMPLIANT		NVUE COMPLIANT	
	STATUS DATE	2/15/2011		2/15/2011		2/15/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	3/1/2009		7/1/1980		7/1/1980	
	HYDROLOGIC MODEL USED	GAGE ANALYSIS	1/1/2007	OTHER	7/1/1980	OTHER	7/1/1980
	HYDRAULIC MODEL USED	HEC-RAS	3/1/2009	HEC-2	7/1/1980	HEC-2	7/1/1980
	IS MODEL IN HODIGITAL FORMAT?	NO		NO		NO	
	IS MODEL IN HADIGITAL FORMAT?	NO		NO		NO	
	CAN HODIGITAL MODEL BE RUN	UNKNOWN		UNKNOWN		UNKNOWN	
	CAN HADIGITAL MODEL BE RUN	UNKNOWN		UNKNOWN		UNKNOWN	
Has there been a major change in gage record since effective analys?		NO	No gage on Reach	NO		NO	
Is there a significant increase in Period of Record?		NO	No Gage on Reach	NO		NO	
Is the Model Methodology no longer appropriate ?		NO		NO		NO	
Has there been an addition or removal of a major flood control structure?		NO		NO		NO	
Is the current Channel outside of SFHA?		NO		NO		NO	
Have there been more than 5 new or removed structures that impact a BFE?		NO		NO		NO	
Has the channel area changed due to significant fill or scour ?		UNKNOWN		NO		NO	
Does this study use rural regression in urbanized areas?		NO		NO		NO	
Are there Repetitive losses outside SFHA?		NO		NO		NO	
Has impervious areas in sub-basin increased > 50% ?		NO		NO		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO		NO		YES	
Has there been channel improvements?		NO		NO		NO	
Is there the availability of better topography/bathymetry?		NO		NO		NO	
Has there been changes to land use or vegetation?		NO		NO		NO	
Have there been significant storms with HWM's?		NO		NO		NO	
Are new Regression equations available?		NO		YES		NO	
	CE TOTAL	0		0		0	
	SE TOTAL	0		1		1	
	COMMENT						

Panaca





Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Panaca CNMS Streams

Zone & Date of Effective Analysis

- AE, 7/1/1980

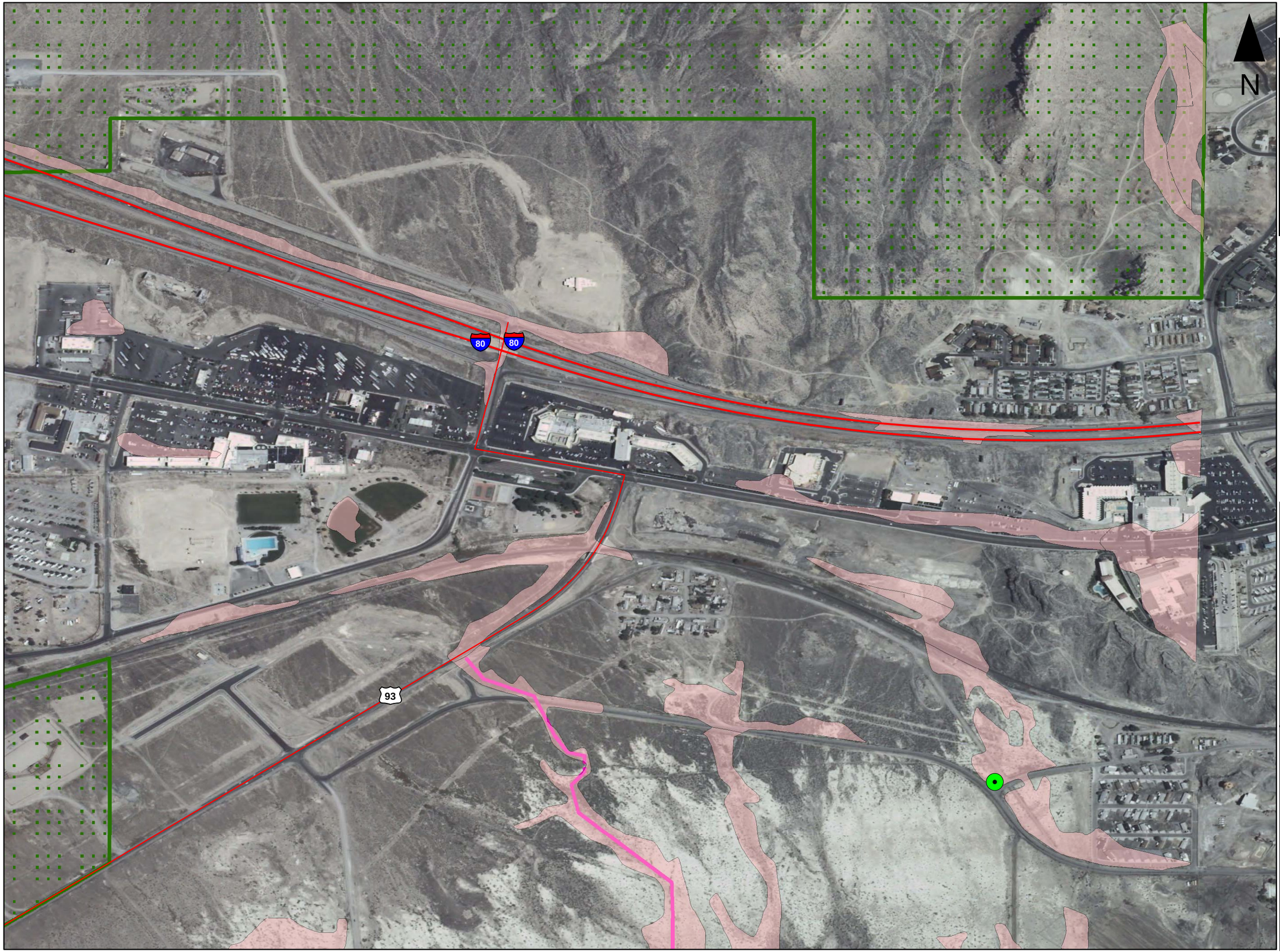
High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

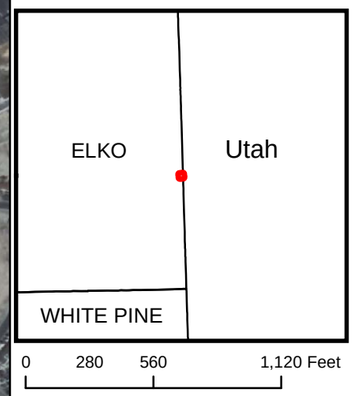
Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information					
	WATER NAME	**Meadow Valley Wash (near Panaca)**		**Cathedral Gorge Wash**	
	FLOOD ZONE	AE		AE	
	VALIDATION STATUS	VALID		VALID	
	STATUS TYPE	NVUE COMPLIANT		NVUE COMPLIANT	
	STATUS DATE	2/15/2011		2/15/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED		DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	7/1/1980		7/1/1980	
	HYDROLOGIC MODEL USED	UNKNOWN		OTHER	
	HYDRAULIC MODEL USED	HEC-2		HEC-2	
	IS MODEL IN HODIGITAL FORMAT?	NO		NO	
	IS MODEL IN HADIGITAL FORMAT?	NO		NO	
	CAN HODIGITAL MODEL BE RUN	UNKNOWN		UNKNOWN	
	CAN HADIGITAL MODEL BE RUN	UNKNOWN		UNKNOWN	
Has there been a major change in gage record since effective analysis?		NO		NO	
Is there a significant increase in Period of Record?		NO		NO	
Is the Model Methodology no longer appropriate?		NO		NO	
Has there been an addition of removal of a major flood control structure?		NO		NO	
Is the current channel outside of SFHA?		NO		NO	
Have there been more than 5 new or removed structures that impact a BFE?		NO		NO	
Has the channel area changed due to significant fill or scour?		NO		NO	
Does the study use rural regression in urbanized areas?		NO		NO	
Are there repeptitive losses outside SFHA?		NO		NO	
Has impervious areas in sub-basin increasead > 50%?		NO		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO		NO	
Has there been channel improvements?		NO		NO	
Is there the availability of better topography/bathymetry?		NO		NO	
Has there been changes to land use or vegetation?		NO		YES	
Have there been significant storms with HWM's?		NO		NO	
Are new regression equations available?		NO		YES	
	CE TOTAL	0		0	
	SE TOTAL	0		2	
	COMMENT				



WWendover1 97



Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

WWendover1 CNMS Streams

Zone & Date of Effective Analysis

- AO, 5/1/1997

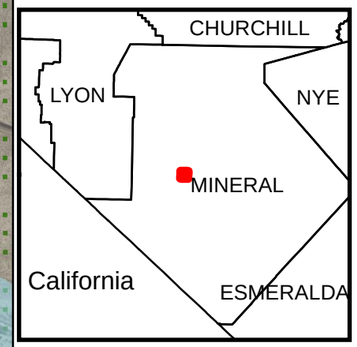
High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways
- WWendover2 Fed Land

Study Reach Engineering and Modeling Information			
	WATER NAME	**Unknown (by North Channel)**	
	FLOOD ZONE	AO	
	VALIDATION STATUS	UNVERIFIED	
	STATUS TYPE	TO BE STUDIED	
	STATUS DATE	2/15/2011	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	5/1/1997	
	HYDROLOGIC MODEL USED	HEC-1	
	HYDRAULIC MODEL USED	Not Modeled	
	IS MODEL IN HODIGITAL FORMAT?	UNKNOWN	
	IS MODEL IN HADIGITAL FORMAT?	UNKNOWN	
	CAN HODIGITAL MODEL BE RUN	UNKNOWN	
	CAN HADIGITAL MODEL BE RUN	UNKNOWN	
Has there been a major change in gage record since effective analysis?		NO	
Is there a significant increase in Period of Record?		NO	
Is the Model Methodology no longer appropriate?		YES	
Has there been an addition or removal of a major flood control structure?		NO	
Is the current channel outside of SFHA?		NO	
Have there been more than 5 new or removed structures that impact a BFE?		NO	
Has the channel area changed due to significant fill or scour?		NO	
Does this study use rural regressoin in urbanized areas?		NO	
Are there Repetitive losses outside the SFHA?		NO	
Has impervious areas in sub-basin increased > 50%		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO	
Has there been channel improvements?		NO	
Is there the availability of better topography/bathymetry?		NO	
Has there been changes to land use or vegetation?		NO	
Have there been significant storms with HWM's?		NO	
Are new regression equations available?		NO	
	CE TOTAL	1	
	SE TOTAL	0	
	COMMENT		

Hawthorne

99



0 480 960 1,920 Feet

N

95

362

359

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Hawthorne CNMS Streams

Zone & Date of Effective Analysis

- AE, 11/1/2000

High Hazard Flooding Areas

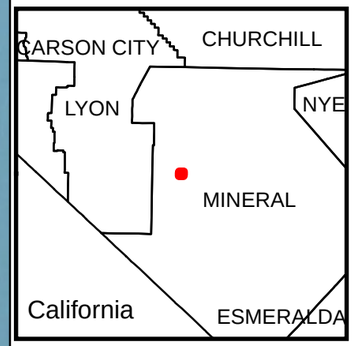
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information			
	WATER NAME	**Corey Creek**	
	FLOOD ZONE	AE	
	VALIDATION STATUS	VALID	
	STATUS TYPE	NVUE COMPLIANT	
	STATUS DATE	9/30/2012	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	11/1/2000	
	HYDROLOGIC MODEL USED	TR-20 (FEBRUARY 1992)	
	HYDRAULIC MODEL USED	OTHER	
	IS MODEL IN HODIGITAL FORMAT?	YES	
	IS MODEL IN HADIGITAL FORMAT?	YES	
	CAN HODIGITAL MODEL BE RUN	YES	
	CAN HADIGITAL MODEL BE RUN	YES	
Has there been a major change in gage record since effective analysis?		NO	
Is there a significant increase in Period of Record?		NO	
Is the Model Methodology no longer appropriate ?		NO	
Has there been an addition or removal of a major flood control structure ?		NO	
Is the current Channel outside of SFHA?		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO	
Has the channel area changed due to significant fill or scour ?		NO	
Does this study use rural regression in urbanized areas?		NO	
Are there Repetitive losses outside SFHA?		NO	
Has impervious areas in sub-basin increased > 50% ?		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO	
Has there been channel improvements?		NO	
Is there the availability of better topography/bathymetry?		NO	YES- LIDAR, Hawthorne Project
Has there been changes to land use or vegetation?		NO	
Have there been significant storms with HWM's?		NO	
Are new Regression equations available?		NO	
	CE TOTAL	0	
	SE TOTAL	0	
	COMMENT	Hydraulic MDL = Field Reconaissance Methods	

Walker Lake 101



0 255 510 1,020 Feet

N

95

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

WalkerLake CNMS Streams

Zone & Date of Effective Analysis

- AO, 5/1/1984

High Hazard Flooding Areas

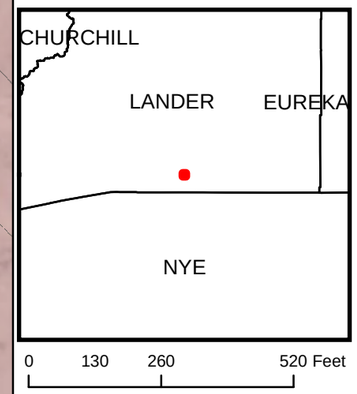
- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information			
	WATER NAME	**Cottonwood Creek**	
	FLOOD ZONE	AO	
	VALIDATION STATUS	VALID	
	STATUS TYPE	NVUE COMPLIANT	
	STATUS DATE	9/30/2012	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	5/1/1984	
	HYDROLOGIC MODEL USED	REGRESSION EQUATIONS	TR-20
	HYDRAULIC MODEL USED	OTHER	FEMA Alluvial Fan Guidelines
	IS MODEL IN HODIGITAL FORMAT?	NO	
	IS MODEL IN HADIGITAL FORMAT?	NO	
	CAN HODIGITAL MODEL BE RUN	NO	
	CAN HADIGITAL MODEL BE RUN	NO	
Has there been a major change in gage record since effective analysis?		NO	
Is there a significant increase in Period of Record?		NO	
Is the Model Methodology no longer appropriate ?		NO	
Has there been an addition or removal of a major flood control structure ?		NO	
Is the current Channel outside of SFHA?		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO	
Has the channel area changed due to significant fill or scour ?		NO	
Does this study use rural regression in urbanized areas?		NO	
Are there Repetitive losses outside SFHA?		NO	
Has impervious areas in sub-basin increased > 50% ?		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO	
Has there been channel improvements?		NO	
Is there the availability of better topography/bathymetry?		NO	
Has there been changes to land use or vegetation?		NO	
Have there been significant storms with HWM's?		NO	
Are new Regression equations available?		YES	
	CE TOTAL	0	
	SE TOTAL	1	
	COMMENT	Hydro MDL = USGS OIR 93-419, Hydra MDL = Field Reconaissance Methods	

Kingston 103



N

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Kingston CNMS Streams

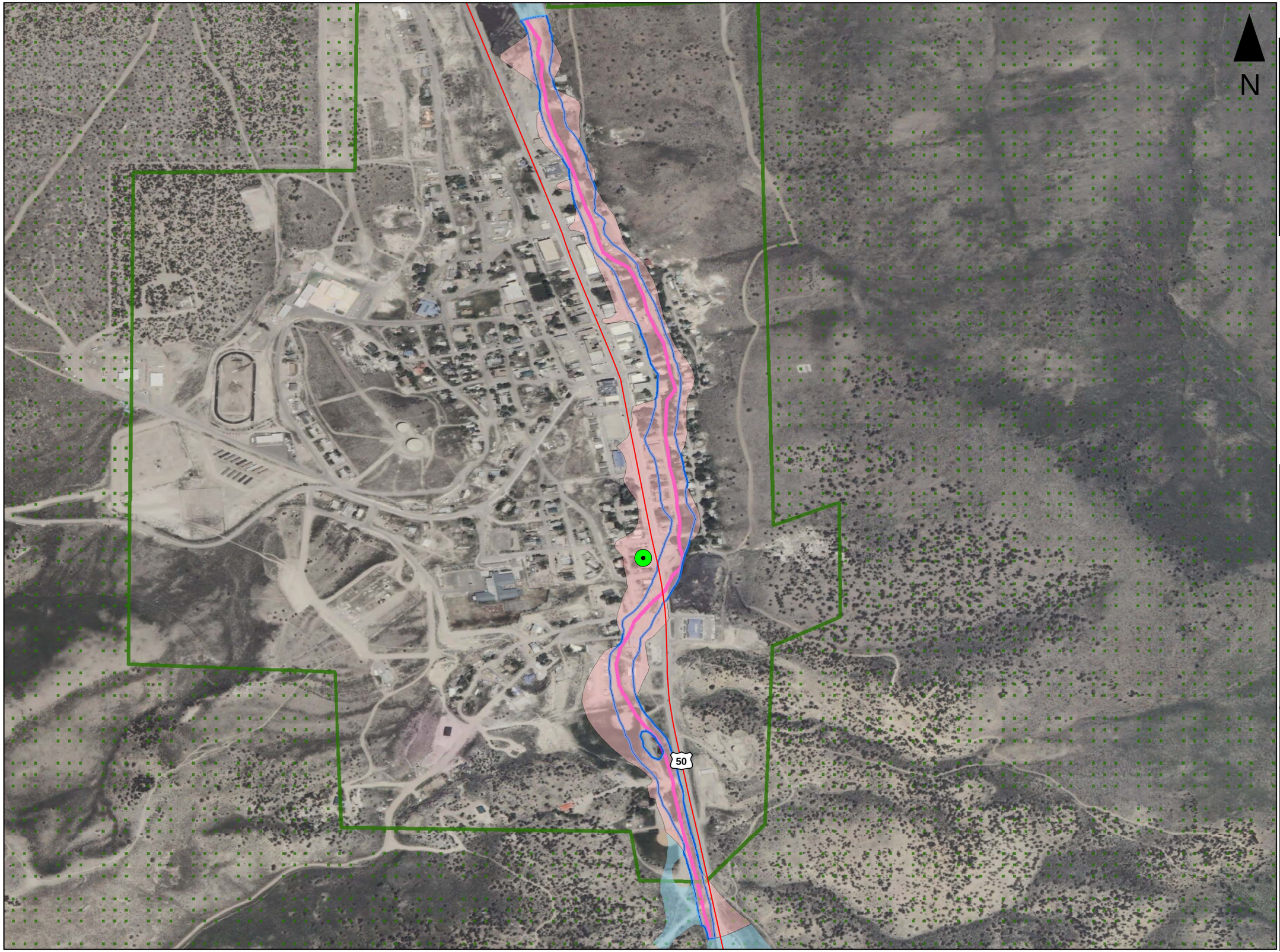
Zones & Date of Effective Analysis

- AE, 5/1/1986
- AO, 5/1/1986

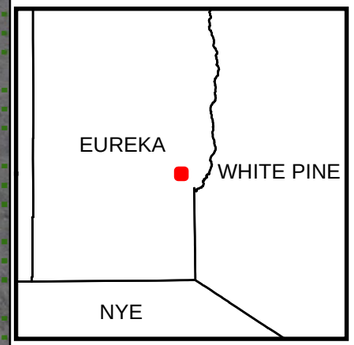
High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

Study Reach Engineering and Modeling Information			
	WATER NAME	**KINGSTON CREEK**	
	FLOOD ZONE	AO	
	VALIDATION STATUS	VALID	
	STATUS TYPE		
	STATUS DATE	4/8/2010	
	STUDY TYPE	Digital Conversion Detailed	
	DATE OF EFFECTIVE ANALYSIS	5/1/1986	
	HYDROLOGIC MODEL USED	HEC-2	
	HYDRAULIC MODEL USED	UNKNOWN	
	IS MODEL IN HODIGITAL FORMAT?	NO	
	IS MODEL IN HADIGITAL FORMAT?	NO	
	CAN HODIGITAL MODEL BE RUN	NO	
	CAN HADIGITAL MODEL BE RUN	NO	
Has there been a major change in gage record since effective analysis?		NO	
Is there a significant increase in Period of Record?		NO	
Is the Model Methodology no longer appropriate ?		NO	
Has there been an addition or removal of a major flood control structure ?		UNKNOWN	
Is the current Channel outside of SFHA?		UNKNOWN	
Have there been more than 5 new or removed structures that impact a BFE ?		UNKNOWN	
Has the channel area changed due to significant fill or scour ?		UNKNOWN	
Does this study use rural regression in urbanized areas?		UNKNOWN	
Are there Repetitive losses outside SFHA?		UNKNOWN	
Has impervious areas in sub-basin increased > 50% ?		UNKNOWN	
Has > 1 and < 5 structures been added or removed that impact a BFE?		UNKNOWN	
Has there been channel improvements?		UNKNOWN	
Is there the availability of better topography/bathymetry?		NO	
Has there been changes to land use or vegetation?		UNKNOWN	
Have there been significant storms with HWM's?		UNKNOWN	
Are new Regression equations available?		UNKNOWN	
	CE TOTAL		
	SE TOTAL		
	COMMENT		



Eureka 105



0 305 610 1,220 Feet

Legend

- Rain Gages
- Stream Gages
- Dams
- Stream Flow Constriction
- Proposed Mitigation Projects
- Areas of Mitigation Success
- Community Flood Projects
- Loss Claims
- At Risk Essential Facilities
- Accredited Levees
- NonAccredited Levees
- Lidar Coverage

Eureka CNMS Streams

Zone & Date of Effectivie Analysis

- AE, 8/1/1996

High Hazard Flooding Areas

- Zone A (Approx)
- Detailed Studies
- Floodways

Land Ownership

- Federal
- State

Study Reach Engineering and Modeling Information	WATER NAME	**Eureka Canyon**	
	FLOOD ZONE	AE	
	VALIDATION STATUS	VALID	
	STATUS TYPE	NVUE COMPLIANT	
	STATUS DATE	9/30/2012	
	STUDY TYPE	DIGITAL CONVERSION DETAILED	
	DATE OF EFFECTIVE ANALYSIS	8/1/1996	
	HYDROLOGIC MODEL USED	HEC-1	
	HYDRAULIC MODEL USED	WSPRO (JUNE 1988)	
	IS MODEL IN HODIGITAL FORMAT?	YES	
	IS MODEL IN HADIGITAL FORMAT?	YES	
	CAN HODIGITAL MODEL BE RUN	YES	
	CAN HADIGITAL MODEL BE RUN	YES	
Has there been a major change in gage record since effective analysis?		NO	
Is there a significant increase in Period of Record?		NO	
Is the Model Methodology no longer appropriate ?		NO	
Has there been an addition or removal of a major flood control structure ?		NO	
Is the current Channel outside of SFHA?		NO	
Have there been more than 5 new or removed structures that impact a BFE ?		NO	
Has the channel area changed due to significant fill or scour ?		NO	
Does this study use rural regression in urbanized areas?		NO	
Are there Repetitive losses outside SFHA?		NO	
Has impervious areas in sub-basin increased > 50% ?		NO	
Has > 1 and < 5 structures been added or removed that impact a BFE?		NO	
Has there been channel improvements?		NO	
Is there the availability of better topography/bathymetry?		NO	
Has there been changes to land use or vegetation?		NO	
Have there been significant storms with HWM's?		NO	
Are new Regression equations available?		NO	
	CE TOTAL	0	
	SE TOTAL	0	
	COMMENT		