

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL WEATHER SERVICE

REPORT ON RIVER GAGE STATION

REVISED, PRINTED DATES: 03/10/2009, 03/10/2009

LOCATION: Vista  
STREAM: Truckee River  
BASIN: Truckee River

HSA: REV

REFERENCES:

- CA DWR TRUCKEE RIVER ATLAS, 6/91
  - City of Sparks Flood Response Action Plan, 2008
  - City of Sparks Dept. of Public Works, 1/1/2006 Aerial Flood Photos
  - CORRESPONDENCE W/CITY OF RENO EMERGENCY MANAGER
  - CORRESPONDENCE W/CITY OF RENO PUBLIC WORKS
  - CORRESPONDENCE W/CITY OF SPARKS EMERGENCY MANAGER
  - CORRESPONDENCE W/CITY OF SPARKS PUBLIC WORKS
  - CORRESPONDENCE W/WASHOE COUNTY DEPT. OF WATER RESOURCES
  - CORRESPONDENCE W/WASHOE COUNTY EMERGENCY MANAGER
  - FEMA FLOOD INSURANCE RATE MAPS: RENO, SPARKS & WASHOE CO.
  - FEMA FLOOD INSURANCE STUDIES: WASHOE CO. NV & INCORPORATED AREAS
  - Glancy, Patrick, USGS Carson City: 1/3/1997 Aerial Flood Photos
  - NV BUREAU OF MINES & GEOLOGY: 1997 NEW YEARS FLOODS IN W NV
  - NV DEPT. CONS. & NATURAL RESOURCES: TRUCKEE RIV CHRONOLOGY, 4/1997
  - NV DEPT OF CONS & NATURAL RESOURCE: THE FLOOD OF 1997; 5/1/1997
  - NWS FORM B-44 (VISTA); 3/30/1965->
  - UNR Coop Ext/Washoe Co: Truckee Meadows Flood Facts, 12/98
  - USCE FEASIBILITY REPORT/EIS: TRUCKEE MEADOWS (RENO-SPARKS METRO AREA):2/85
  - USCE Floodplain Info, Truckee R:Reno-Sparks-Truckee Meadows NV, 10/1970
  - USCE Hydrology Report: Truckee R CA-NV, 2/1980
  - USCE Jan 1997 Flood Assessment: E Sierra/W NV Basins, 9/1997
  - USDA SCS, NV Dept. of Conservation & Natural Resources, CA RA: Fld Chronology, Truckee River Basin, 1861-1976:9/1977
  - USDA SCS, NV Dept. of Conservation & Natural Resources, CA RA: Water & Related Land Resources: Central Lahontan Basin;
- 7/75
- USGS Carson City NV 1:100,000 SCALE MAP 1979
  - USGS Fact Sheet FS123-97; Flood of 1/97 in the Truckee R Basin; 8/1997
  - USGS Fact Sheet 037-97:Flood Control Effects, TKE River Basin Reservoirs:12/31/96-1/4/97:3/97
  - USGS Flood Frequency Analysis:10/1/1969-9/30/2007
  - USGS Gaging Stn Description, 8/16/07
  - USGS Peak Flow Data, 8/18/1899-9/30/2008
  - USGS RENO NV 1:100,000 SCALE MAP 1980
  - USGS RENO NV 7.5 MINUTE QUADRANGLE 1967
  - USGS VISTA NV 7.5 MINUTE QUADRANGE 1975/1982
  - USGS WATER RESOURCES DATA FOR NEVADA, 1899-2008

ABBREVIATIONS:

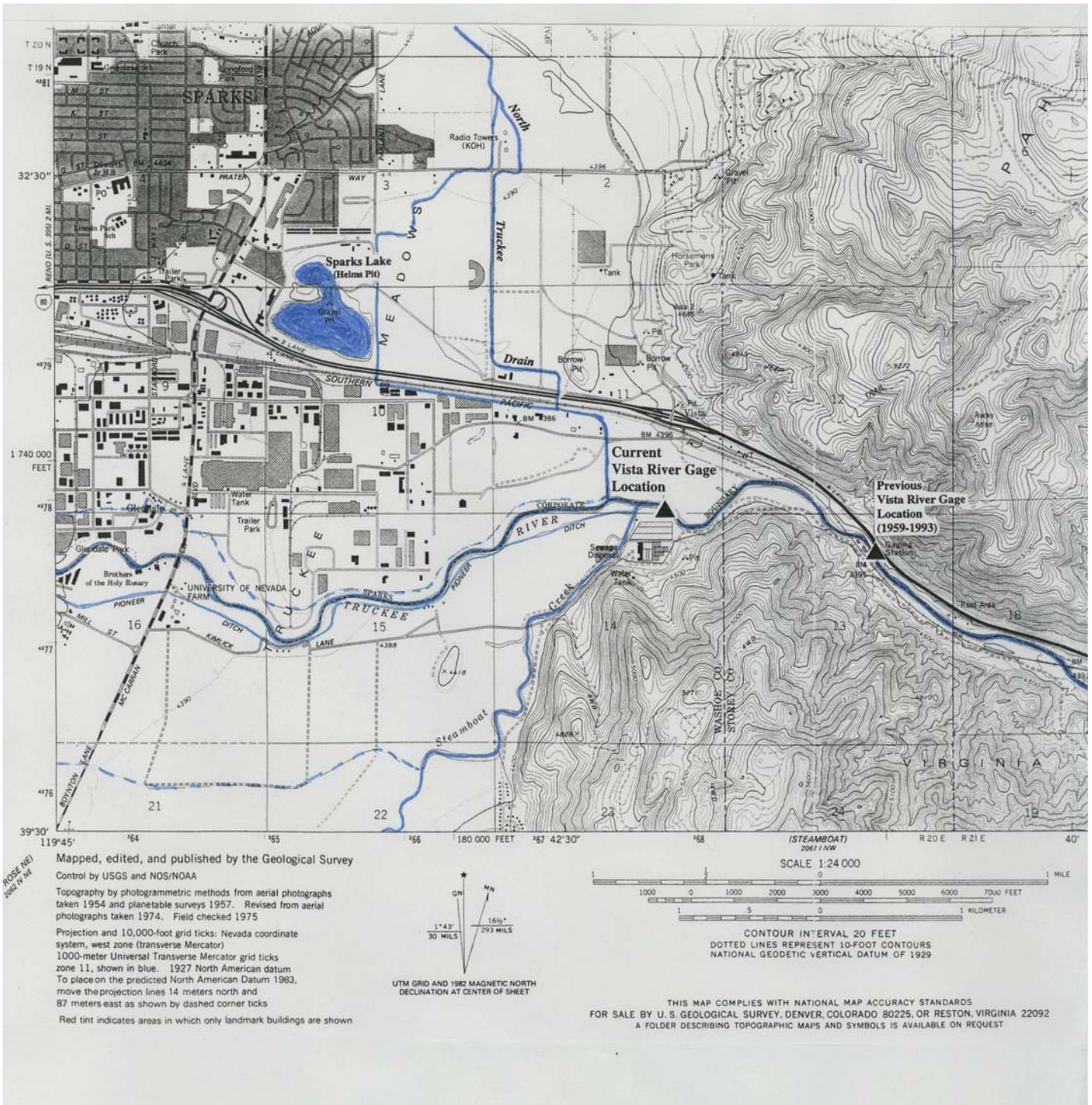
- |                       |  |
|-----------------------|--|
| BM - bench mark       | EPA - Environmental Protection Agency          |
| DS - downstream       | IBWC - International Boundary and Water Comm.  |
| US - upstream         | MSRC - Mississippi River Commission            |
| HW - high water       | MORC - Missouri River Commission               |
| LW - low water        | NOAA - National Oceanic and Atmospheric Admin. |
| RB - right bank       | NOS - National Ocean Survey                    |
| LB - left bank        | NWS - National Weather Service                 |
| MGL - mean gulf level | TVA - Tennessee Valley Authority               |
| MLW - mean low water  | USACE - U.S. Army Corps of Engineers           |
| MSL - mean sea level  | USBR - U.S. Bureau of Reclamation              |
| MLT - mean low tide   | USGS - U.S. Geological Survey                  |
| MT - mean tide        | USWB - U.S. Weather Bureau                     |
| WQ - water quality    | NGVD - National Geodetic Vertical Datum        |
| RM - reference mark   | NAD - North American Datum                     |
| RP - reference point  |  |

LOCATION IDENTIFICATION: VISN2  
NWS INDEX NUMBER: 26-8794-1  
USGS NUMBER: 10350000

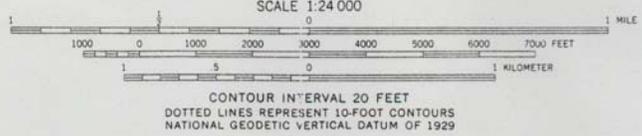
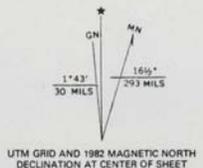
MAP OF GAGE LOCATION

LATITUDE: 39 31 14  
LONGITUDE: 119 42 00

SOURCE: USGS Station Description



Mapped, edited, and published by the Geological Survey  
Control by USGS and NOS/NOAA  
Topography by photogrammetric methods from aerial photographs taken 1954 and planetable surveys 1957. Revised from aerial photographs taken 1974. Field checked 1975  
Projection and 10,000-foot grid ticks: Nevada coordinate system, west zone (transverse Mercator)  
1000-meter Universal Transverse Mercator grid ticks zone 11, shown in blue. 1927 North American datum  
To place on the predicted North American Datum 1983, move the projection lines 14 meters north and 87 meters east as shown by dashed corner ticks  
Red tint indicates areas in which only landmark buildings are shown



CONTOUR INTERVAL 20 FEET  
DOTTED LINES REPRESENT 10-FOOT CONTOURS  
NATIONAL GEODETIC VERTICAL DATUM OF 1929  
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

## BENCHMARKS

ELEVATION OF GAGE ZERO: 4367.600  
LEVELING AGENCY AND DATE: USGS  
RATING AGENCY: USGS

VERTICAL DATUM: NGVD 1929  
CHECKBAR:

BENCHMARK	DESCRIPTION	GAGE ZERO	DATUM
CSG1	Crest Stage Gage #1 Pin. Levels of 8/14/2007.	5.416	4373.016
CSG2	Crest Stage Gage #2 Pin. Levels of 8/14/2007.	14.500	4382.100
CSG3	Crest Stage Gage #3 Pin. Levels of 8/14/2007.	18.932	4386.532
RM13	Brass tablet on cableway right anchor block. Levels of 8/14/2007.	32.178	4399.778
RM8	Bolt in NE corner of concrete gage pad. Levels of 9/26/1994.	30.997	4398.597
RM9	Rebar rod set in concrete (damaged) on top of bank at approx. elev. of gage house, 97 ft ESE of gage house. Levels of 8/14/2007.	32.578	4400.178
RP1	Lag bolt in the lowest staff plate. Levels of 8/14/2007.	5.194	4372.794
RP2	Lag bolt in second staff plate. Levels 8/14/2007.	8.042	4375.642
RP4	Lag bolt in third staff plate. Levels of 8/14/2007.	15.216	4382.816
RP5	Lag bolt in fourth staff plate. Levels of 8/14/2007.	21.692	4389.292

GAGES

DCP

TELEM

NESS ID: 1714D726  
 OWNER: USGS  
 REPORT TIME: 01:49  
 INTERVAL: 240

TYPE OF TELEMETRY: LARC  
 OWNER: NWS  
 PHONE NUMBER:  
 INTERVAL: 60  
 PAYOR/COST OF LINE: Assoc

GAGE TYPE	OWNER	MAINTENANCE	BEGAN	ENDED	GAGE LOCATION/REMARKS
STAFF	USGS	USGS	08/18/1899	12/31/1907	LB, 700' US of SPRR Brdg; 1.15 mi DS of Steamboat Ck Conf. Dif. datum.
RECORDER	USGS	USGS	08/18/1899	12/31/1907	LB, 700' US of SPRR Brdg; 1.15 mi DS of Steamboat Ck Conf. Dif. datum.
FLOAT	USGS	USGS	08/18/1899	12/31/1907	LB, 700' US of SPRR Brdg; 1.15 mi DS of Steamboat Ck Conf. Dif. datum.
STAFF	USGS	USGS	03/21/1908	04/30/1909	LB, 900' US of SPRR Brdg, 1.15 mi DS of Steamboat Ck Conf. Gage height only, unpublished. Different datum.
FLOAT	WTRMSTR	WTRMSTR	01/01/1932	10/03/1958	LB, 150' US of SPRR Brdg, 1.15 mi DS of confluence w/Steamboat Ck. Datum 4374.22' In stilling well.
RECORDER	WTRMSTR	WTRMSTR	01/01/1932	10/03/1958	LB, 150' US of SPRR Bridge, 1.15 mi DS of Steamboat Ck conf. Datum 4374.22' In gage house.
STAFF	WTRMSTR	WTRMSTR	01/01/1932	10/03/1958	LB, 150' US of SPRR Brdg, 1.15 mi DS of Steamboat Ck Conf. Datum 4374.22'
RECORDER	USGS	USGS	10/03/1958	08/17/1959	In gage house, LB, 150' DS of SPRR Brdg, 1.15 mi DS of conf. w/ Steamboat Ck (same as former Water Master location). Datum 4374.22'.
FLOAT	USGS	USGS	10/03/1958	08/17/1959	In stilling well, LB, 150' US of SPRR Brdg, 1.15 mi DS of conf. w/Steamboat Ck (same as former Water Master location). Datum 4374.22'.
STAFF	USGS	USGS	10/03/1958	08/17/1959	LB, 150' US of SPRR Brdg, 1.15 mi DS of conf w/Steamboat Ck (same as former Water Master location). Datum 4374.22'
STAFF	WATERMASTER	WATERMASTER	08/17/1959	12/10/1959	LB, under SPRR Brdg, 1.15 mi DS of conf w/ Steamboat Ck. Read daily by Federal Watermaster. Datum unknown.
FLOAT	USGS	USGS	12/10/1959	09/30/1993	In stilling well; LB, 800' DS of SPRR Brdg, 0.9 mi SE of Vista, 1.5 mi DS of conf. w/Steamboat Ck. Ref'd to IS STAFF. Datum 4368.59'
IS STAFF	USGS	USGS	12/10/1959	09/30/1993	In well, LB, 800' DS of SPRR Brdg, 0.9 mi SE of Vista, 1.5 mi DS of Stmboat Ck conf, 4 mi SE of Sparks. Range:0-13.54'. Ref. gage. Datum 4368.59'
OS STAFF	USGS	USGS	12/10/1959	09/30/1993	LB, 800' DS of SPRR Brdg, 0.9 mi SE of Vista, 1.5 DS of Steamboat Ck conf, 4 mi SE of Sprks. 3 Secs: 1.60-5.10', 5.10-6.70', 6.70-10.10'. Dtm 4368.59'
RECORDER	USGS	USGS	12/10/1959	09/30/1993	In gage house on LB, 800' DS of SPRR Brdg, 0.9 mi SE of Vista, 1.5 mi DS of Stmbt Ck conf, 4 mi SE of Sparks.
TELEMARK	NWS	NWS	08/15/1960	06/05/1982	In gage house, driven by USGS RECORDER. On LB, 800' DS of SPRR Brdg, 0.9 SE of Vista, 1.5 mi DS of conf w/Steamboat Ck, 4 mi SE of Sparks.
BDT/DCD	NWS	NWS	08/15/1960	06/05/1982	In gage house, driven by USGS RECORDER. On LB, 800' DS of SPRR Brdg, 0.9 SE of Vista, 1.5 mi DS of conf w/Steamboat Ck, 4 mi SE of Sparks.
LARC	NWS	NWS	04/21/1989	09/30/1993	HANDAR 550A. Driven by NWS Shaft Encoder. On LB, 800' DS of SPRR Brdg, 1.5 DS of conf w/ Steamboat Ck.
SHFT ENCDR	NWS	NWS	04/21/1989	09/30/1993	HANDAR 436A, driven by USGS RECORDER, drove LARC. In gage house, LB, 800' DS of SPRR Brdg, 1.5 DS of conf w/ Steamboat Ck. In gage house.
BUBBLER	USGS	USGS	10/01/1993		Paroscientific PS2 SDI-12 Pressure transducer. RB, 600' DS of conf. w/Steamboat Ck, 0.4 mi S of Vista, 1.0 mi US of SPRR Bldg. Datum 4367.60
CSGs	USGS	USGS	10/01/1993		Bolted to 3 staff gage plates in channel. RB, 600' DS of conf. w/Steamboat Ck. As of 8/14/2007, pin elevs. 5.416', 14.500', 18.932'.
LARC	NWS	NWS	10/01/1993		HANDAR 550A, in gage house on RB, 600' DS of Steamboat Ck conf, 0.4 S of Vista, 1.0 mi US of SPRR Brdg. Driven by USGS PS2 Bubbler.
OS STAFF	USGS	USGS	10/01/1993		RB, 600' DS of conf w/Stmbt Ck, 0.4 mi S of Vista, 1.0 mi US of SPRR Brdg, NE of Rno/Sprks Wastewater Treatment Plant. 3 posts with staff plates. Ref. gage, datum 4367.60'.
DCP	USGS	USGS	09/01/1998		HANDAR 555FG, NESDIS ID #1714D726 in gage house on RB, 600' DS of Steamboat Ck conf, 0.4 S of Vista, 1.0 mi US of SPRR Brdg. Driven by USGS PS2 Bubbler.

Datum

HISTORY

PUBLICATION/LOCATION OF RECORDS	STARTING DATE	ENDING DATE
USDA Truckee River Basin Flood Chronology	01/01/1861	12/31/1976
USGS Peak Flow Data	08/18/1899	09/30/2008
USGS Water Resources Data	08/18/1899	09/30/2008
NWS Coop Station Report (B44)	08/15/1960	
USGS Flood Frequency Analysis	10/01/1969	09/30/2007
COE Flood Plain Info:Truckee Basin	10/01/1970	
USDA Water Resources Info,Central Lahontan Basin	07/01/1975	
COE Hydrology Report:Truckee River	02/01/1980	
COE Feasibility Report/EIS:Truckee River	02/01/1985	
CADWR Truckee R Atlas	06/01/1991	
FEMA Flood Insurance Study:Washoe County	09/30/1994	
NV DCNR:Truckee River Chronology	04/01/1997	
NV DCNR: Flood of January 1997	05/01/1997	
USGS FS123-97,1/97 Truckee Flood	08/01/1997	
COE 1/1997 Flood Assessment	09/01/1997	
NV Bureau of Mines & Geology:1/1997 Flood	04/01/1998	
UNR/Washoe County Flood Facts	12/01/1998	
Sparks Flood Response Action Plan	10/01/2008	
USGS Gaging Station Description	08/17/2007	

TYPE OF GAGE	OWNER	STARTING DATE	ENDING DATE
STAFF	USGS	08/18/1899	12/31/1907
RECORDER	USGS	08/18/1899	12/31/1907
FLOAT	USGS	08/18/1899	12/31/1907
STAFF	USGS	03/21/1908	04/30/1909
FLOAT	WTRMSTR	01/01/1932	10/03/1958
RECORDER	WTRMSTR	01/01/1932	10/03/1958
STAFF	WTRMSTR	01/01/1932	10/03/1958
RECORDER	USGS	10/03/1958	08/17/1959
FLOAT	USGS	10/03/1958	08/17/1959
STAFF	USGS	10/03/1958	08/17/1959
STAFF	WTRMSTR	08/17/1959	12/10/1959
FLOAT	USGS	12/10/1959	09/30/1993
IS STAFF	USGS	12/10/1959	09/30/1993
OS STAFF	USGS	12/10/1959	09/30/1993
RECORDER	USGS	12/10/1959	09/30/1993
TELEMARK	NWS	08/15/1960	06/05/1982
BDT/DCD	NWS	08/15/1960	06/05/1982
LARC	NWS	04/21/1989	09/30/1993
BUBBLER	USGS	10/01/1993	
CSGs	USGS	10/01/1993	
LARC	NWS	10/01/1993	
OS STAFF	USGS	10/01/1993	
DCP	USGS	09/01/1998	

ZERO ELEVATION	STARTING DATE
4374.220	01/01/1932
4368.590	12/10/1959
4367.600	10/01/1993

CRESTS

FLOOD STAGE: 15.00 ACTION STAGE: 13.00 BANKFULL STAGE:  
 FLOOD FLOW: 7330 ACTION FLOW: 5400

DATE OF CREST	TIME LST	CREST (ft)	FLOW (CFS)	FROM HIGH WATERMARKS	BASED ON OLD DATUM	CAUSED BY ICE JAM	REMARKS
03/31/1903	UNDEF	13.28	5650				<b>*NOTE! CREST STAGES BEFORE WY2006 WERE CONVERTED FROM CREST FLOWS USING USGS RATING 35 (10/1/2008).</b>
04/15/1904	UNDEF	16.49	8940				
05/07/1906	UNDEF	13.08	5470				<b>*NOTE! MEASURED CREST STAGE FOR DATUM IN USE @ TIME IS INCLUDED IN REMARKS; CREST STAGES UNAVAILABLE BEFORE 1960.</b>
03/18/1907	UNDEF	17.42	10000				
12/12/1937	UNDEF	17.20	9760				<b>*NOTE! ONLY CRESTS &gt;5000 CFS USED IN CREST TABLE.</b>
01/22/1943	UNDEF	15.33	7680				Stg NA; est w/Rtg35. Q=avg daily Q; actual crst hier. Q est usng Reno, Farad Q.
11/21/1950	UNDEF	16.32	8750				Crest stg for crest Q from USGS Rtg 35 (10/2008). Measured crest stage NA.
05/04/1952	UNDEF	14.77	7090				Crest stg for crest Q from USGS Rtg 35 (10/2008). Measured crest stage NA.
02/01/1963	UNDEF	23.80	18900				Crest stage from USGS Rtg 35 (10/2008). Measured crest @ old datum 16.76'
12/23/1964	UNDEF	18.80	11700				Crest stg for crest Q from USGS Rtg 35 (10/2008). Measured crest stg: 13.51'
05/22/1967	UNDEF	14.72	7040				Crest stg for crest Q from USGS Rtg 35 (10/2008). Measured crest stage: 10.87'
05/13/1969	UNDEF	13.12	5510				Crest stg for crest Q from USGS Rtg 35 (10/2008). Measured crest stage: 9.46'
01/22/1970	UNDEF	15.29	7630				Crest stg for crest Q from USGS Rtg 35 (10/2008). Measured crest stage: 11.29'
01/14/1980	UNDEF	17.38	9970				Crest stg for crest Q from USGS Rtg 35 (10/2008). Measured crest stg: 13.10'
12/20/1981	UNDEF	16.14	8550				Crest stg for crest Q from USGS Rtg 35 (10/2008). Measured crest stage: 12.75'
03/13/1983	UNDEF	15.67	8040				Crest stg for crest Q from USGS Rtg 35 (10/2008). Measured crest stage: 11.72'
11/24/1983	UNDEF	14.90	7230				Crest stg for crest Q from USGS Rtg 35 (10/2008). Measured crest stage: 11.19'
02/18/1986	UNDEF	22.00	16100				Crest stg for crest Q from USGS Rtg 35 (10/2008). Measured crest stg: 15.82'
03/10/1995	UNDEF	16.36	8800				Crest stg for crest Q from USGS Rtg 35 (10/2008). Measured crest stg: 15.41'
05/18/1996	UNDEF	15.52	7200				Crest stg for crest Q from USGS Rtg 35 (10/2008). Measured crest stage: 15.52.
01/02/1997	UNDEF	23.55	18500				Crest stg for crest Q from USGS Rtg 35 (10/2008). Measured crest 24.16.
03/24/1998	UNDEF	13.75	6090				Crest stg for crest Q from USGS Rtg 35 (10/2008). Measured crest stage: 15.52.
12/31/2005	UNDEF	20.28	13700				

LOW WATER RECORDS (<50 CFS)

DATE OF LOW WATER	STAGE (ft)	FLOW (CFS)	REMARKS
07/20/1900	3.09	38	38 cfs Mean, 7/20-22/1900. Stg est fm RT35 (10/1/2008).
08/26/1935	2.70	7	Daily mean Q. Stg est fm RT35 (10/1/2008).
09/23/1990	3.09	38	Daily mean Q. Stg est from RT35 (10/1/2008).
10/05/1990	3.08	36	Daily mean Q. Stg est fm RT35 (10/1/2008).
06/13/1992	3.01	28	Daily mean Q. Stg est fm RT35 (10/1/2008).
09/21/1994	3.05	33	Daily mean Q. Stg est fm RT 35 (10/1/2008).

CONDITIONS AFFECTING FLOW

MILES ABOVE MOUTH: 53.4      DRAINAGE AREA: 1431.0      POOL STAGE:

STREAM BED: Boulders and cobbles.

REACH: US 395 in Reno to Nixon.

REGULATION: Flow regulated by Lk Tahoe, Donner Lk & Washoe Lk; Independence, Stampede, Boca, Martis Ck, Prosser Ck Resvs. and other lakes. Combined capacity approx. 1,073,000 AF.

DIVERSION: Many; for irrigation & power above station. Station is below all return flows from Truckee Meadows & Spanish Springs Valley.

WINTER: Minimal due to substantial proportion of relatively warm water discharged into the channel from Reno-Sparks water reclamation facility via Steamboat Ck. 600 feet upstream. Ice effects will probably not occur except under the most severe winter weather conditions.

TOPOGRAPHY: Channel straight @ gage, bends S 1200' US; N 700' US. 100' DS channel shallows abruptly. Banks steep, ~25' high both left and right banks above gage. ~15' high below gage. Rocks ("reefs") ~0.5 mi DS controls stage through lower Truckee Meadows during floods.

REMARKS: At flood flows, shallow channel @ Vista "reefs" ~0.5 mi DS is control for river through lower Truckee Meadows upstream to ~McCarran Blvd in Sparks. Also @ flood flows, stage @ gage is Steamboat CK control which joins river 600' US. Truckee can cause Steamboat CK to backwater US to Rosewood Lakes Golf Course.

DAMAGE

STAGE	AREAS AFFECTED
13.00	A few low meadow and agricultural areas along river begin to have minor lowland flooding. About 5500 cfs. Chance in any year about 1 in 4 (from USGS Flood Frequency Analysis).
14.00	Maximum safe flow from US Highway 395 in Reno to Nixon, including Truckee Meadows. Releases from Prosser, Stampede, and Boca Reservoirs cut by the US Water Master to maintain less than 6000 cfs through Reno. Very minor flooding of meadows below East McCarran Boulevard in Sparks. Some backwater effects of high Truckee stages extend south along Steamboat Creek to near Pembroke Drive and Rosewood Lakes. About 6000 cfs. Chance in any year about 1 in 5 (from USGS Flood Frequency Analysis).
15.00	Flood Stage - Flooding begins in lowest portions of Truckee Meadows, including Truckee River bike path through Sparks, University Farm, Boynton Slough, Rosewood Lakes Golf Course. High Truckee stages begin to cause backwater flooding from storm drains in lower Sparks industrial area, and along Steamboat Creek. About 7000 cfs. Chance in any year about 1 in 6 (from USGS Flood Frequency Analysis).
16.00	Minor flooding begins below US Highway 395 through Sparks, downstream to Lockwood, Tracy, Wadsworth, and Nixon. Below US Highway 395, Grand Sierra RV Park, Truckee River bike path, and parks along river begin flooding. Below East McCarran Blvd, the Sparks industrial area, University Farm, Boynton Slough, Rosewood Lakes Golf Course, and Truckee River bike path flood. Water up to a foot deep in lowest streets of Sparks. About 8400 cfs. Chance in any year about 1 in 7 (from USGS Flood Frequency Analysis).
16.50	Minor flooding US Highway 395 to Nixon, including Truckee Meadows, Sparks, Lockwood, Tracy, and Wadsworth. From US Highway 395 to McCarran Blvd, Grand Sierra RV Park, Truckee bike path, parks along river flood. Below McCarran, Sparks industrial area, University Farms, Boynton Slough, Rosewood Lakes Golf Course. Truckee bike path flooded up to a foot deep. Some homes in Wadsworth become inaccessible, but not flooded. Water over a foot deep in lowest streets of Sparks. About 9000 cfs. Chance in any year about 1 in 10 (from USGS Flood Frequency Analysis).
17.50	Minor flooding from US Highway 395 in Reno to Nixon, including Truckee Meadows, Sparks, Lockwood, Tracy, and Wadsworth. River begins to go well out of banks below US Highway 395, many areas flooded between Greg and Mill Streets between US Highway 395 and McCarran Blvd. Grand Sierra RV Park flooded. East of McCarran, much of University Farms area flooded, with Sparks industrial area south of Greg Street flooded up to 2 feet deep. About 10000 cfs. Chance in any year about 1 in 10 (from USGS Flood Frequency Analysis).
18.50	Moderate flooding from US Highway 395 in Reno to Nixon, including Truckee Meadows, Sparks, Lockwood, Tracy, and Wadsworth. Sparks industrial area flooded up to 3 feet deep, sandbags should be in place. River out of banks below US Highway 395, many areas flood between Greg and Mill Streets west of McCarran Blvd. River completely out of banks from Greg Street south to Pembroke Drive east of McCarran. About 11000 cfs. Chance in any year about 1 in 12 (from USGS Flood Frequency Analysis).
19.00	Significant flooding US Highway 395 at Reno to Nixon, including Truckee Meadows and Sparks. Serious lowland flooding Vista to Nixon. Transportation begins to be affected in eastern Truckee Meadows, Greg Street south to Mill Street flooded from Grand Sierra east to McCarran Blvd. Below McCarran, Glendale Avenue to Pembroke Drive flooded. Grand Sierra RV Park flooded. Sparks industrial area under about 4 feet of water, some buildings flood. About 12000 cfs. Chance in any year about 1 in 15 (from USGS Flood Frequency Analysis).
20.00	Significant flooding US Highway 395 in Reno to Nixon. Sparks industrial area floods up to 5 feet deep, some buildings flood. Lowest homes in Lockwood, Wadsworth, and Nixon begin to flood. Moderate transportation impacts, many roads flood. Some roads affected include Rock Blvd south of Greg Street, East McCarran from Interstate 80 south to Pembroke, Mill Street east of Greg Street. Water up to bottom of Glendale Avenue bridge, which remains open. About 13000 cfs. Chance in any year about 1 in 18 (from USGS Flood Frequency Analysis).
20.50	Significant flooding US Highway 395 in Reno to Nixon. Moderate transportation impacts and road damage. Sparks industrial area flooded up to 6 feet, many buildings flooded. Glendale Ave bridge closed, Greg Street still open. Water leaves channel at Glendale, flows south to Grand Sierra Pond, but Reno Airport not yet flooded. Rock Blvd closed south of Greg St. McCarran Blvd closed from Interstate 80 south to Boynton Slough and Pembroke. Mill Street closed east of Greg St. About 14000 cfs. Chance in any year 1 in 20 (from USGS Flood Frequency Analysis).
21.00	Major flooding from US Highway 395 at Reno to Nixon including Sparks, Lockwood, Tracy, and Wadsworth. Significant property and infrastructure damage. Sparks industrial area flooded 6 to 7 feet deep. Many bridges over Truckee in Reno-Sparks flooded, but little impact to Reno Airport, Interstate 80, or US Highway 395. Phone, power, water supplies begin to be affected. Western Hidden Valley, by Rosewood Lakes Golf Course, begins to flood. About 15000 cfs. Chance in any year about 1 in 22 (from USGS Flood Frequency Analysis).
21.50	Major flooding from US Highway 395 at Reno to Nixon including Truckee Meadows, Sparks, Lockwood, Tracy, and Wadsworth. Significant property and infrastructure damage. Sparks industrial area flooded over 7 feet deep. Many bridges over Truckee in Reno-Sparks flooded with serious transportation impacts. Flooding just begins to affect Reno Airport. Phone, power, water supplies begin to be affected. About 15500 cfs. Chance in any year about 1 in 25 (from USGS Flood Frequency Analysis).
22.00	Major flooding from US Highway 395 at Reno to Nixon. Significant property and infrastructure damage through the region. Phone, power, water supplies begin to be affected. Sparks industrial area flooded up to 8 feet deep. Reno Airport begins to flood with severe runway ponding due to poor drainage. Many bridges closed or flooded with serious transportation impacts. Interstate 80 and US Highway 395 not yet affected. About 16000 cfs. Chance in any year about 1 in 28 (from USGS Flood Frequency Analysis).

DAMAGE

STAGE	AREAS AFFECTED
22.50	Major flooding with serious damage to property and infrastructure from Reno to Nixon, including Truckee Meadows. Reno Airport flooded 1 to 2 feet deep as river leaves channel near Glendale Avenue and fills Grand Sierra Pond. Most roads and bridges near river flood. Severe flooding on Steamboat Creek and North Truckee Drain due to Truckee backup. Flood waters in Sparks industrial area up to 9 feet deep. About 16900 cfs. Chance in any year about 1 in 30 (from USGS Flood Frequency Analysis).
23.00	Extensive property and infrastructure damage from US Highway 395 at Reno to Nixon including Truckee Meadows. Sparks industrial area flooded up to 10 feet deep. Reno Airport under 3 to 5 feet of water. Mira Loma, Boynton Slough, Rosewood Lakes Districts flooded. Access to Hidden Valley nearly cut. Flooding on Steamboat Creek south of Mira Loma, and North Truckee Drain north to Prater Way due to Truckee River backup. About 17600 cfs. Chance in any year about 1 in 35 (from USGS Flood Frequency Analysis).
24.00	Flood disaster from US Highway 395 at Reno to Nixon including Sparks. Extensive damage to property, infrastructure in floodplain. Reno Airport under 4 feet of water. Sparks industrial area flooded over 10 feet deep. Interstate 80 and US Highway 395 closed in all directions from Reno. Sewer lines on bridges severed. Truckee Meadows flooded from Reno Airport east to Hidden Valley, and Glendale Avenue, Interstate 80, Prater Way south to Mira Loma. About 19200 cfs. Chance any year about 1 in 45 (from USGS Flood Frequency Analysis).
25.00	Record catastrophic flood from Reno to Nixon. Extensive damage to property and infrastructure in floodplain. Reno Airport under 5 feet of water. Power, phone, transportation, water, hospital services disrupted. Most bridges over Truckee River closed. Truckee Meadows flooded US Highway 395 and Reno Airport east to Hidden Valley, and from Glendale Avenue and Interstate 80 south to Mira Loma. Interstate 80 and US Highway 395 closed in all directions. Around 21000 cfs. Chance in any year about 1 in 50 (from USGS Flood Frequency Analysis).
26.00	Record catastrophic flood from Reno to Nixon. Extensive damage to property and infrastructure in floodplain. Reno Airport under 6 feet of water. Power, phone, transportation, water, hospital services disrupted. Most bridges over Truckee River closed. Truckee Meadows flooded US Highway 395 and Reno Airport east to Hidden Valley, and from Glendale Avenue and Interstate 80 south to Mira Loma. Interstate 80 and US Highway 395 closed in all directions. Around 22500 cfs. Chance in any year about 1 in 65 (from USGS Flood Frequency Analysis).



## CONTACTS

SQ	CONTACT/REMARKS	PHONE
1	USGS Carson City USGS operates/maintains gage. Steve Berris is Field Office Chief. Kerry Garcia is Hydro Data Chief	775-887-7600
2	Washoe Co. DEM Aaron Kenneston is Washoe County Emergency Mgr, operates Washoe EOC. Monitors VISN2 for flood impacts. in Washoe Co.	775-337-5898
3	Sparks Police Dept. Phone is non-emergency dispatch.	775-353-2279
4	Sparks Public Works Shawn Gooch is Sparks Flood Control Manager; Sparks flood plan based on VISN2 forecasts.	775-353-7824
5	Sparks Emergency Mgr As of 1/2008, Sparks Emergency Manager position was vacant; Sparks Asst City Manager, Steve Driscoll temporarily taking EM responsibilities.	775-353-1633
6	Washoe Co. Sheriff Phone is non-emergency dispatch.	775-785-4629
7	Washoe Co. DWR Ed Evans manages Washoe Co Truckee R Flood Detection Plan and ALERT at VISN2. Jeanne Reufer is Washoe DWR Mgr.	775-954-4636
8	Truckee R Fld Mgt Project www.floodawareness.com Naomi Duerr is Director, Paul Urban is Project Mgr. All contacts available at floodawareness website contact list.	775-850-7460
9	US Water Master Garry Stone is Water Master, Chad Blanchard is asst. WM pays LARC phone charges, uses gage data for resv & fld control, H2O supply mgt.	775-784-5241
10	Reno EM Marty Scheuerman is Reno EM.	775-334-2300
11	WFO-Reno El Techs maintain LARC, SH does QC.	775-673-8100





Aerial view of Truckee River AT Vista, looking east. Interstate 80, as well as Greg St. can be seen to the left of the Truckee River.

LOCATION: Truckee River AT Vista, NV  
ID: VISN2

HSA: REV

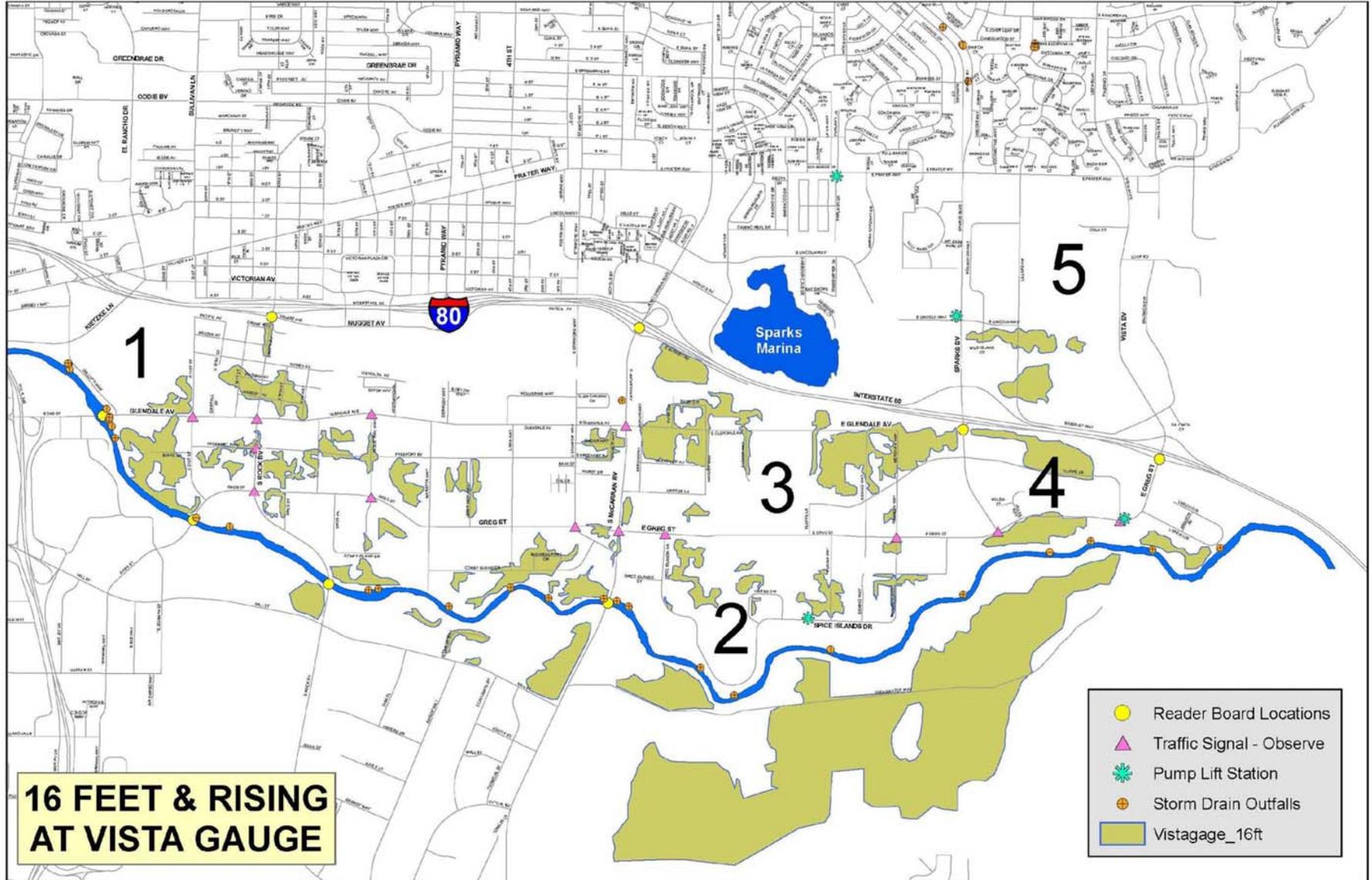
Revised, Printed Dates: 03/10/2009, 03/10/2009  
NWS FORM E-19 Aerial View, East



Aerial view of Truckee River at Vista, looking north. Steamboat Creek flows in from the south, while North Truckee Drain comes in from the North.

### Inundation Maps of Sparks...

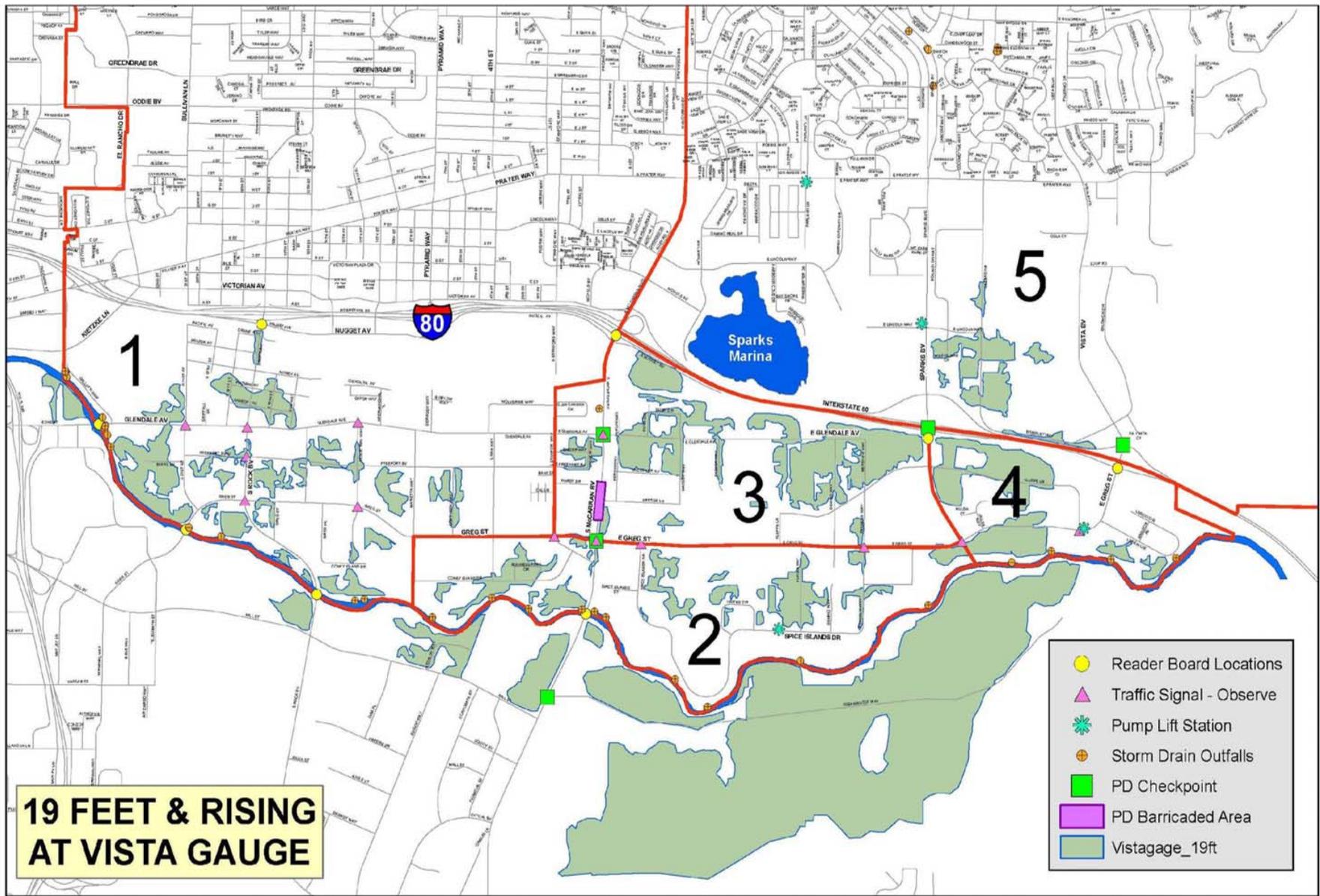
For the following stages at Vista: 16 ft, 19 ft, 20 ft, 21 ft, 22 ft, 23 ft and 24 ft. These maps represent the best estimates of inundation at these stages based on both model output and observations. These maps are used in flood fight efforts by the City of Sparks. (From City of Sparks Flood Response Plan, 2008)



LOCATION: Truckee River AT Vista, NV  
ID: VISN2

HSA: REV

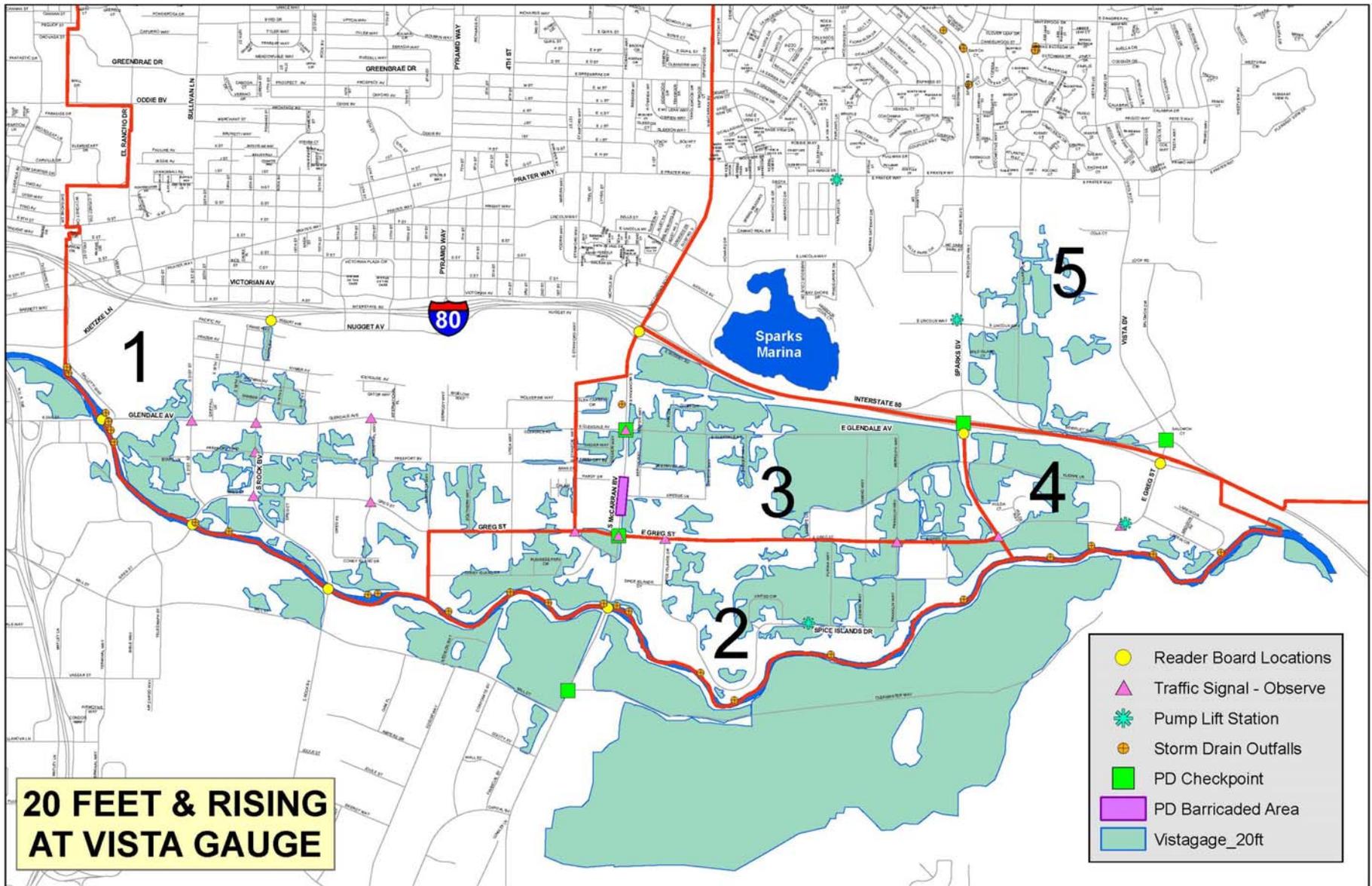
Revised, Printed Dates: 03/10/2009, 03/10/2009  
NWS FORM E-19 Inundation Map, 16 Feet



LOCATION: Truckee River AT Vista, NV  
ID: VISN2

HSA: REV

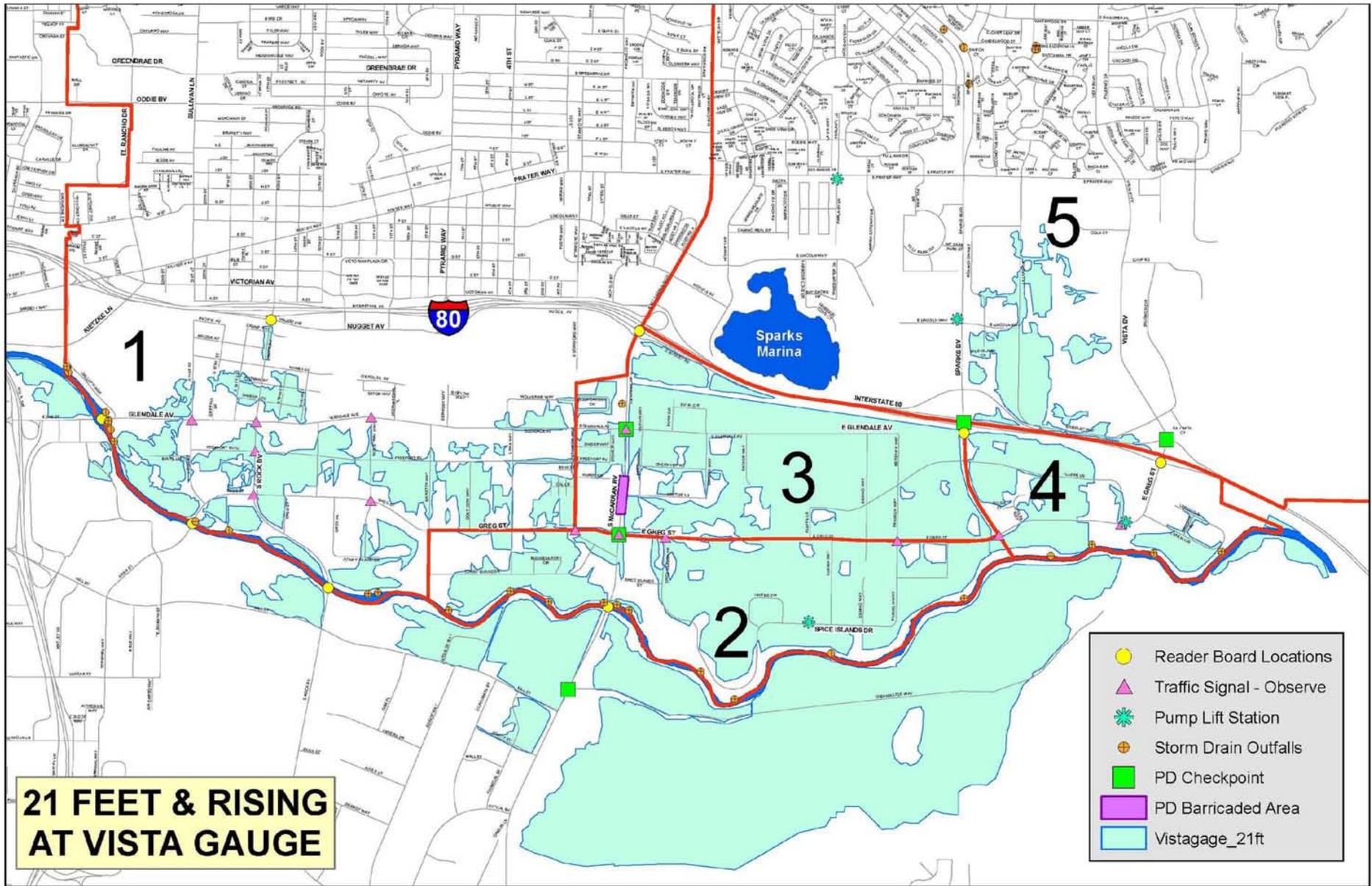
Revised, Printed Dates: 03/10/2009, 03/10/2009  
NWS FORM E-19 Inundation Map, 19 Feet



LOCATION: Truckee River AT Vista, NV  
 ID: VISN2

HSA: REV

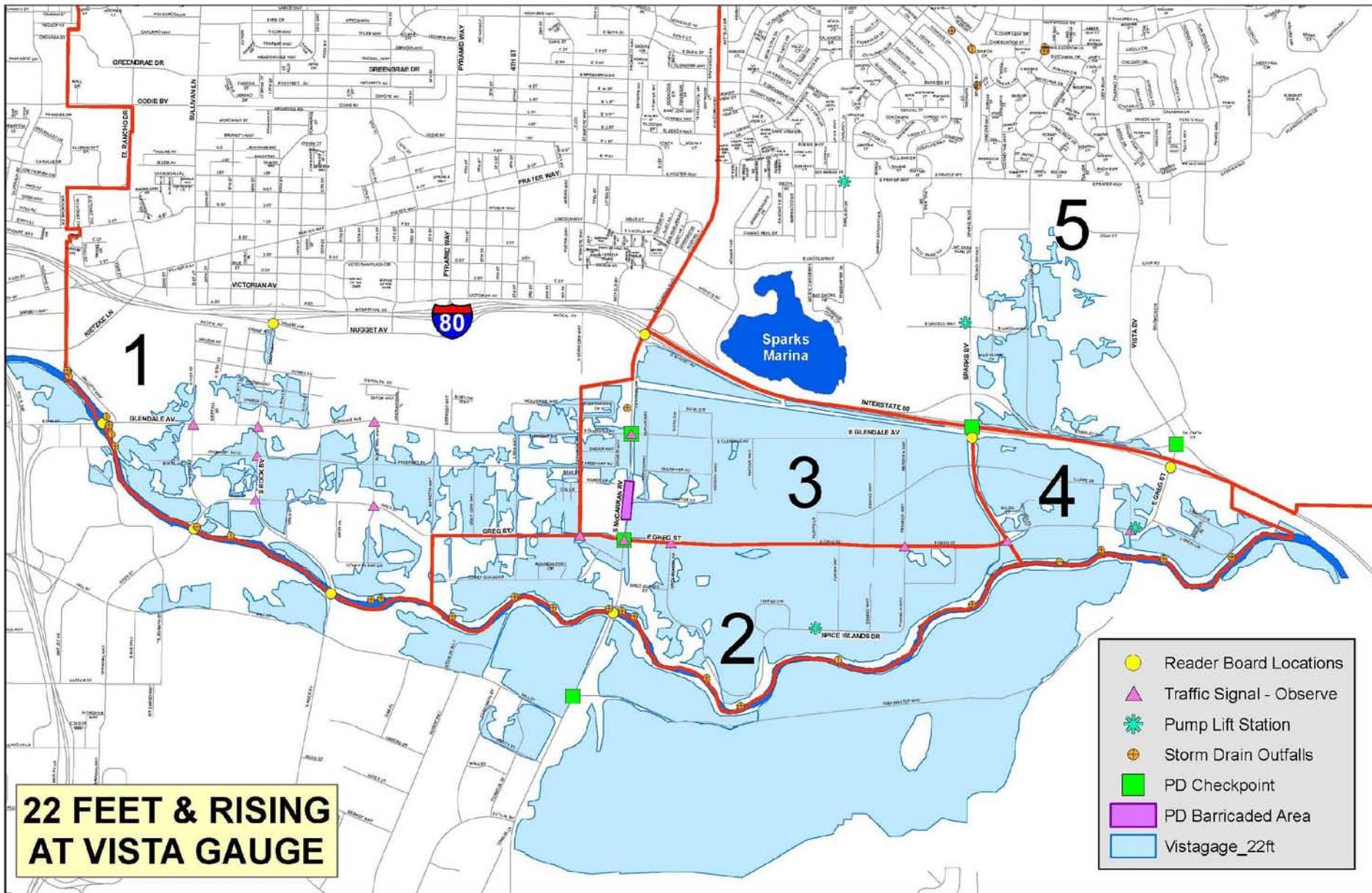
Revised, Printed Dates: 03/10/2009, 03/10/2009  
 NWS FORM E-19 Inundation Map, 20 Feet



LOCATION: Truckee River AT Vista, NV  
 ID: VISN2

HSA: REV

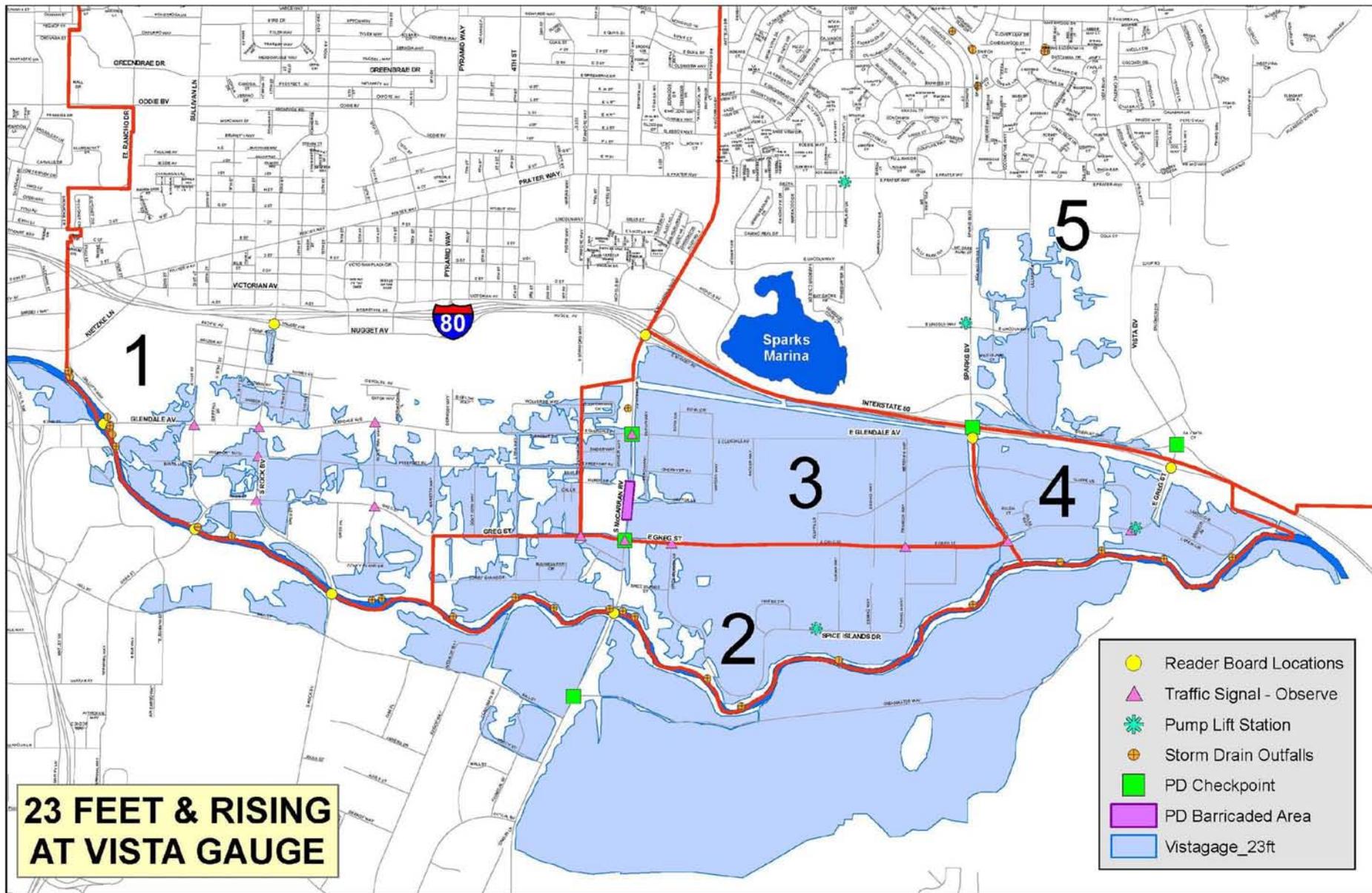
Revised, Printed Dates: 03/10/2009, 03/10/2009  
 NWS FORM E-19 Inundation Map, 21 Feet



LOCATION: Truckee River AT Vista, NV  
 ID: VISN2

HSA: REV

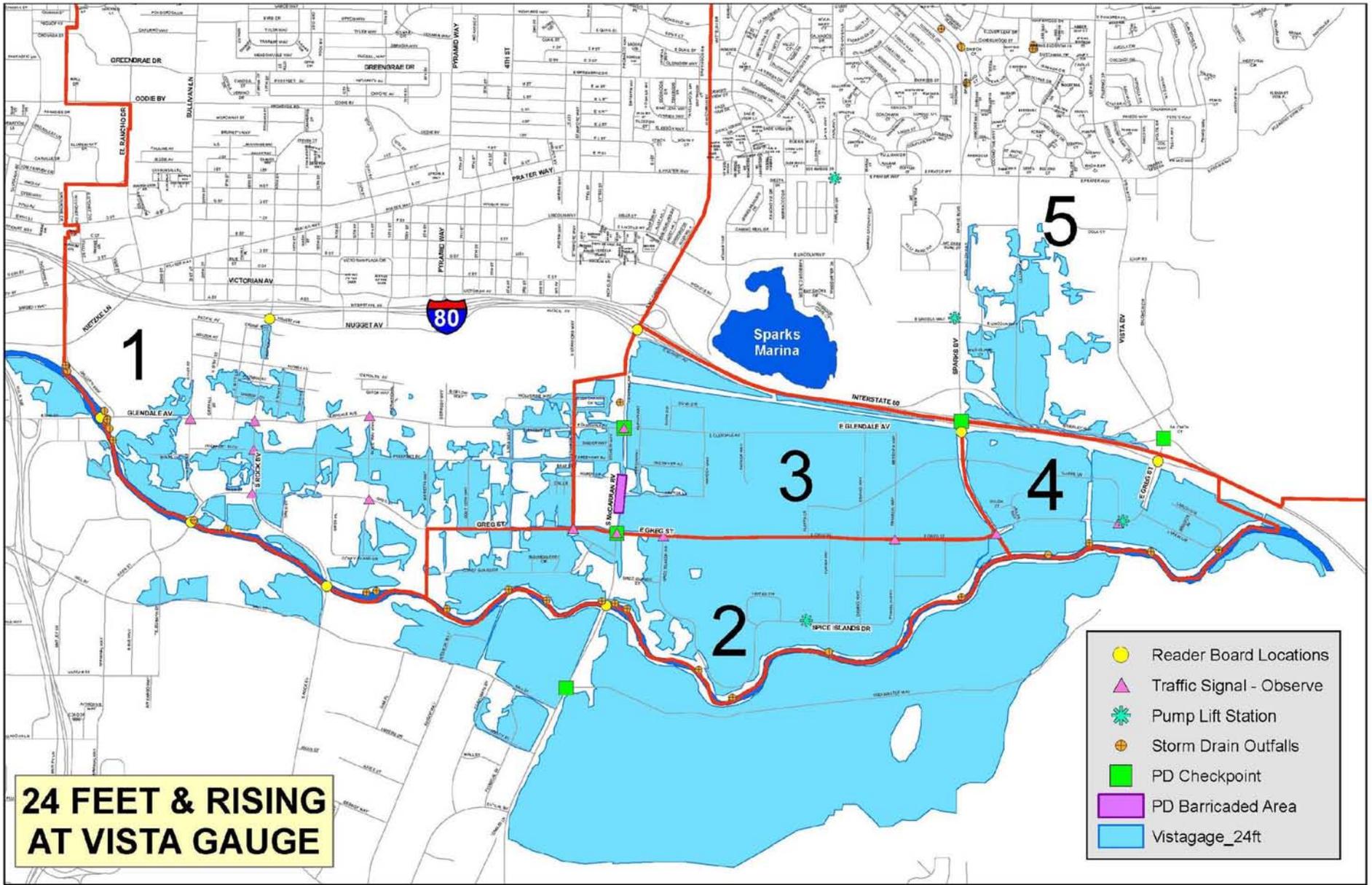
Revised, Printed Dates: 03/10/2009, 03/10/2009  
 NWS FORM E-19 Inundation Map, 22 Feet



LOCATION: Truckee River AT Vista, NV  
 ID: VISN2

HSA: REV

Revised, Printed Dates: 03/10/2009, 03/10/2009  
 NWS FORM E-19 Inundation Map, 23 Feet



LOCATION: Truckee River AT Vista, NV  
 ID: VISN2

HSA: REV

Revised, Printed Dates: 03/10/2009, 03/10/2009  
 NWS FORM E-19 Inundation Map, 24 Feet



Aerial view of Truckee River above Vista looking east (downstream) 1/1/2006, 10:22 am after flood crest on 12/31/2005. Greg Blvd in foreground. Approx. Stage 14.00, flow 6,590 cfs (Photo Courtesy City of Sparks Dept. of Public Works)

LOCATION: Truckee River AT Vista, NV  
ID: VISN2

HSA: REV

Revised, Printed Dates: 03/10/2009, 03/10/2009  
NWS FORM E-19 1/1/2006 PHOTO 1



View of Truckee River above Vista looking south, 1/1/2006, 10:21 am after flood crest on 12/31/2005. North Truckee Drain is on the bottom, with Steamboat Creek coming in from above. Truckee Meadows Water Reclamation Facility is on the left. Approx. Stage 14.00, flow 6,590 cfs  
(Photo Courtesy City of Sparks Dept. of Public Works)



View of Truckee River above Vista looking SE (downstream to the upper left) 1/1/2006, 10:21 am after flood crest on 12/31/2005. North Truckee Drain is on the bottom, with Steamboat Creek coming in from above. Truckee Meadows Water Reclamation Facility is on the top. Approx. Stage 14.00, flow 6,590 cfs  
(Photo Courtesy City of Sparks Dept. of Public Works)



View of Truckee River at Vista looking south (downstream to the left) 1/1/2006, 10:20 am after flood crest on 12/31/2005. Location of VISN2 gage house shown. Approx. Stage 14.00, flow 6,590 cfs (Photo Courtesy City of Sparks Dept. of Public Works)



View of Truckee River above Vista looking northeast on 1/3/1997, after flood crest on 1/2/1997. Steamboat Creek and North Truckee Drain are completely in backwater. Approx. flow, 15,400 cfs; approx. stage, 21.5 feet (USGS Rating 35). Photo Courtesy of Pat Glancy, USGS Carson City, NV

LOCATION: Truckee River AT Vista, NV  
ID: VISN2

HSA: REV

Revised, Printed Dates: 03/10/2009, 03/10/2009  
NWS FORM E-19 1/3/1997 PHOTO 1



View of Sparks Industrial Area upstream of Vista gage looking just east of north on 1/3/1997, after flood crest on 1/2/1997. Truckee River is in bottom right. Approx. flow, 15,400 cfs; approx. stage, 21.5 feet (USGS Rating 35).  
Photo Courtesy of Pat Glancy, USGS Carson City, NV

LOCATION: Truckee River AT Vista, NV  
ID: VISN2

HSA: REV

Revised, Printed Dates: 03/10/2009, 03/10/2009  
NWS FORM E-19 1/3/1997 PHOTO 2



Another view of Sparks Industrial Area upstream of Vista gage, similar to photo 6. Looking just east of north on 1/3/1997, after flood crest on 1/2/1997. Truckee River is in extreme bottom right. Approx. flow, 15,400 cfs; approx. stage, 21.5 feet (USGS Rating 35). Photo Courtesy of Pat Glancy, USGS Carson City, NV



Sparks Industrial Area upstream of Vista gage, looking north on 1/3/1997, after flood crest on 1/2/1997. Approx. flow, 15,400 cfs; approx. stage, 21.5 feet (USGS Rating 35). Photo Courtesy of Pat Glancy, USGS Carson City, NV

LOCATION: Truckee River AT Vista, NV  
ID: VISN2

HSA: REV

Revised, Printed Dates: 03/10/2009, 03/10/2009  
NWS FORM E-19 1/3/1997 PHOTO 4



Sparks Industrial Area in Larkin Circle area (just east of Greg St and just northeast of VISN2 gage). Looking north on 1/3/1997, after flood crest on 1/2/1997. Note lumber and other debris piled up on north of levee. Approx. flow, 15,400 cfs; approx. stage, 21.5 feet (USGS Rating 35). Photo Courtesy of Pat Glancy, USGS Carson City, NV

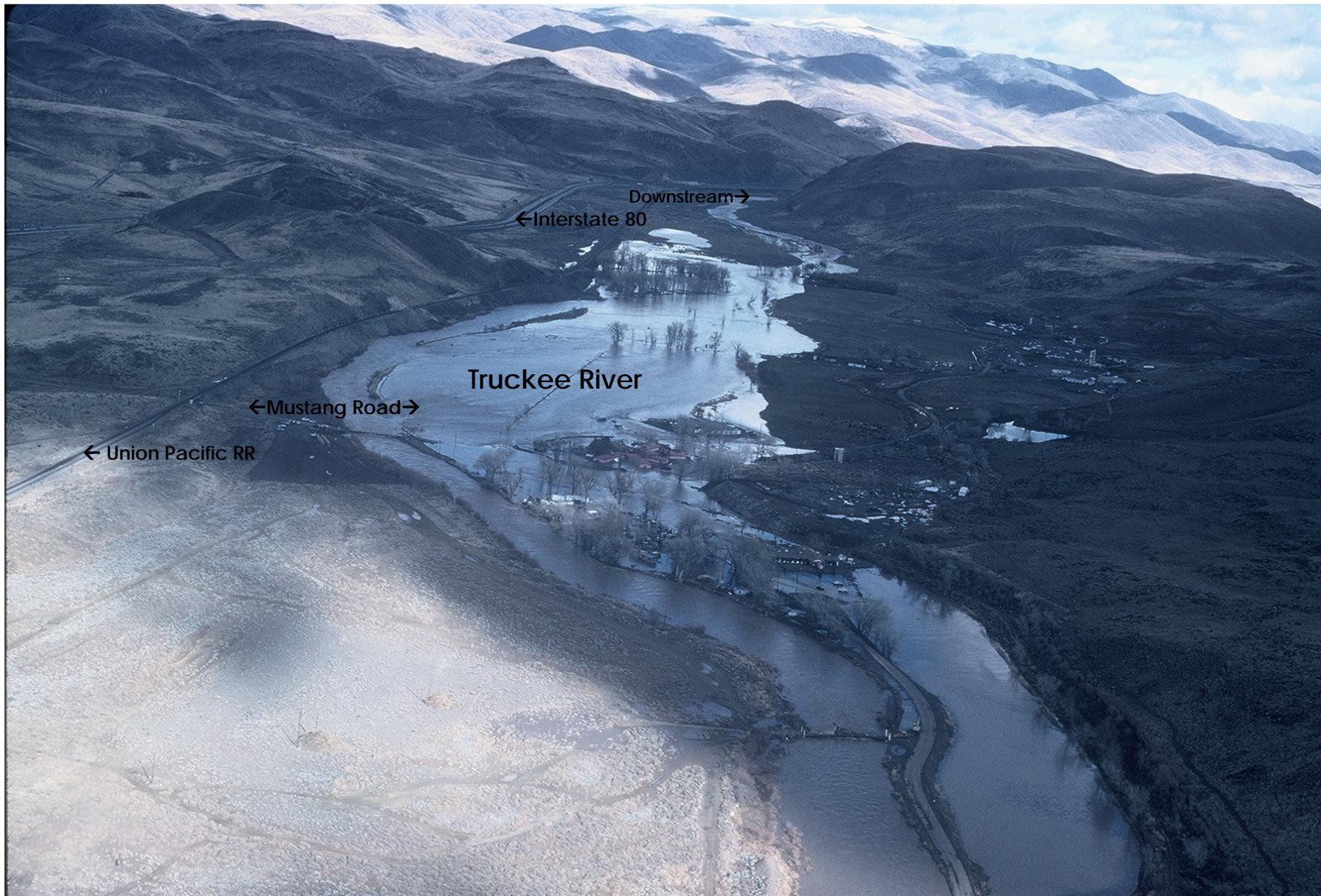
LOCATION: Truckee River AT Vista, NV  
ID: VISN2

HSA: REV

Revised, Printed Dates: 03/10/2009, 03/10/2009  
NWS FORM E-19 1/3/1997 PHOTO 5



Lockwood, NV, about 3 miles below Vista gage. Looking northeast on 1/3/1997, after flood crest on 1/2/1997. Approx. flow at VISN2, 15,400 cfs; approx. stage, 21.5 feet (USGS Rating 35). Photo Courtesy of Pat Glancy, USGS Carson City, NV



Mustang-Hafed area, NV, about 1 mile east of Lockwood, 4 river miles below Vista gage. Looking northeast on 1/3/1997, after flood crest on 1/2/1997 at VISN2. Photo Courtesy of Pat Glancy, USGS Carson City, NV

LOCATION: Truckee River AT Vista, NV  
ID: VISN2

HSA: REV

Revised, Printed Dates: 03/10/2009, 03/10/2009  
NWS FORM E-19 1/3/1997 PHOTO 7



Tracy Power Plant, NV, about 10.6 river miles below Vista gage. Looking northeast on 1/3/1997, after flood crest on 1/2/1997 at VISN2. Photo Courtesy of Pat Glancy, USGS Carson City, NV



Truckee River at Interstate 80 Bridge near Wadsworth (which is in top left of picture). About 29 river miles below Vista gage. Looking northeast on 1/3/1997. The Truckee River crested at Wadsworth at 19100 cfs on 1/3/1997, near the time of this photo. Photo Courtesy of Pat Glancy, USGS Carson City, NV

LOCATION: Truckee River AT Vista, NV  
ID: VISN2

HSA: REV

Revised, Printed Dates: 03/10/2009, 03/10/2009  
NWS FORM E-19 1/3/1997 PHOTO 9



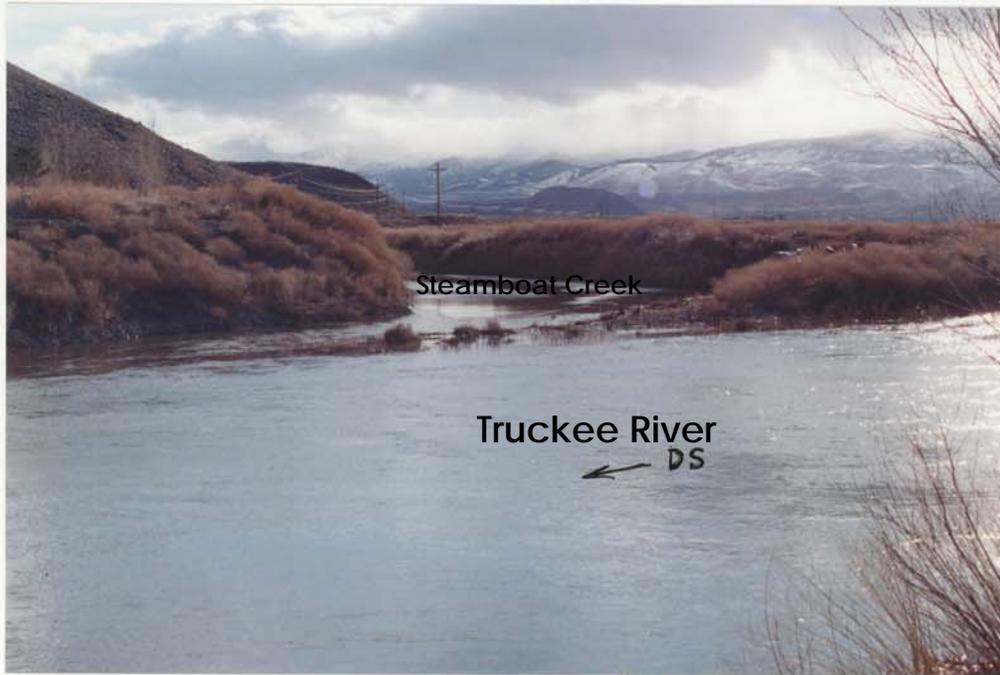
Truckee River at Wadsworth, NV, about 29.7 river miles below Vista gage. Looking north-northeast on 1/3/1997. The Truckee River crested at Wadsworth at 19100 cfs on 1/3/1997, near the time of this photo.  
Photo Courtesy of Pat Glancy, USGS Carson City, NV

LOCATION: Truckee River AT Vista, NV  
ID: VISN2

HSA: REV

Revised, Printed Dates: 03/10/2009, 03/10/2009  
NWS FORM E-19 1/3/1997 PHOTO 10

## PHOTOGRAPHS OF GAGE LOCATION



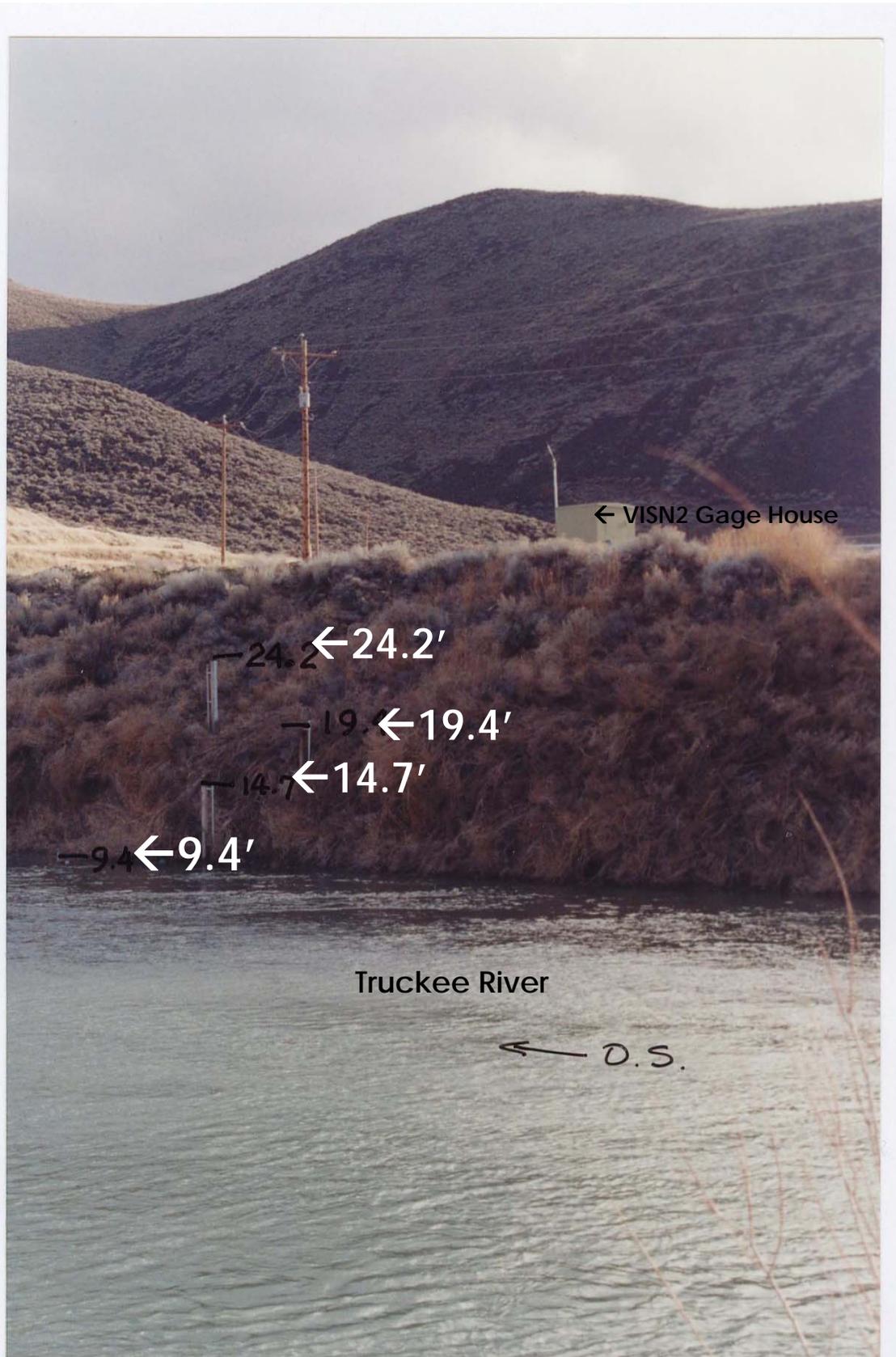
**Top Photo:**

Looking US (WNW). All 4 USGS OS staff gages shown, with approx. stages @ tops of each gage indicated: #1 (Lowest): 9.4'; #2: 14.7'; #3: 19.4'; #4 (Highest): 24.2'. Taken 2/24/99; 1545 PST; Stage 9.07 ft., 2570 cfs.

**Bottom Photo:**

Looking SW across Truckee from LB at confluence of Steamboat Ck and Truckee R., about 600' US of gage. Sierra Nevada foothills can be seen in the distance. Taken 2/25/99; 1600 PST; Stage: 9.14 ft., 2606 cfs.

(Note: Staff gage with top elevation of 14.7' no longer at site.)



Looking SE at the gage house from across the river on the bike path. Tops of all four staffs marked at approx. 9.4, 14.7, 19.4, and 24.2 feet. Photo taken on 2/25/1999 at 16:00 PST. Stage 9.14 ft, flow 2606 cfs. (Note: Staff gage with top elevation of 14.7' no longer at site.)



Looking NE from the gage house, downstream. River bends to the north. Photo taken on 1/6/2009 at 11:30am (PST). Stage 3.82 ft, flow 254 cfs.

LOCATION: Truckee River AT Vista, NV  
ID: VISN2

HSA: REV

Revised, Printed Dates: 03/10/2009, 03/10/2009  
NWS FORM E-19 1/6/2009 PHOTOS