RIVER-QUALITY ASSESSMENT OF THE TRUCKEE AND CARSON RIVER SYSTEM, CALIFORNIA AND NEVADA--HYDROLOGIC CHARACTERISTICS

By WILLIAM M. BROWN III, JON O. NOWLIN, LAWRENCE H. SMITH, and MARY R. FLINT

U.S. GEOLOGICAL SURVEY

Open-File Report 84-576

A product of the River-Quality
Assessment of the Truckee
and Carson River Basins,
Nevada and California

8048-17

Sacramento, California
1986

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information
write to:

District Chief
U.S. Geological Survey
Federal Building, Room W-2234
2800 Cottage Way
Sacramento, CA 95825

Copies of this report
can be purchased from:

Open-File Services Section
Western Distribution Branch
U.S. Geological Survey
Box 25425, Federal Center
Denver, CO 80225
Telephone: (303) 236-7476

CONTENTS

PLATES (in pocket)

FIGURES

FIGURES (Continued)

TABLES

CONVERSION FACTORS

The inch-pound system is used in this report. For those who prefer metric units, the conversion factors for the terms used in this report are listed below:

Multiply	By	To obtain
acre-ft (acre-feet	0.001233	cubic hectometers
acre-ft/yr (acre-feet per year)	0.001233	cubic hectometers per year
acres	0.4047	square hectometers
ft (feet)	0.3048	meters
ft^3/s (cubic feet per second)	0.02832	cubic meters per second
ft/mi (feet per mile)	0.1894	meter per kilometer
inches	25.4	millimeters
lb (pounds)	0.454	kilograms
Mgal/d (million gallons per day)	3785	cubic meters per day
mi (miles)	1.609	kilometers
mi^2 (square miles)	2.590	square kilometers
ton/d (tons per day)	0.9072	megagrams per day

Use the following to convert degrees Fahrenheit (°F) to degress Celsius (°C):

$$(°C) = 5/9\ (°F - 32)$$

ABBREVIATIONS

Landsat	-	Any of three satellites that collect radiometric data used to produce a variety of images of the Earth's surface.
mg/L	-	Milligrams per liter.
STORET	-	Storage and Retrieval system of the U.S. Environmental Protection Agency.
WATSTORE	-	National Water Data Storage and Retrieval system of the U.S. Geological Survey.
STATPAC	-	Library of computer programs of the U.S. Geological Survey designed to perform a variety of statistical analyses, primary on large bodies of data.
SAS	-	Statistical Analysis System.
NASA	-	National Aeronautics and Space Administration.
EROS	-	Earth Resources Observation System.
NDEP	-	Nevada Division of Environmental Protection.
DRI	-	Desert Research Institute, Reno, Nev.
SPPC	-	Sierra Pacific Power Company.

RIVER-QUALITY ASSESSMENT OF THE TRUCKEE AND CARSON RIVER SYSTEM

CALIFORNIA AND NEVADA--HYDROLOGIC CHARACTERISTICS

By William M. Brown III, Jon O. Nowlin, Lawrence H. Smith, and Mary R. Flint

WHAT THIS REPORT IS ABOUT

The hydrologic story of the Truckee and Carson Rivers is dominated by four principal themes. First is the geomorphic uniqueness of the region through which the rivers flow. The second relates to the ways that the rivers are connected by pipes, flumes, and canals and controlled by dams and gates. Third is the relentless demand by numerous interests for the limited supplies of water that the rivers provide. And the fourth encompasses the institutions that direct the allocation of water among existing and prospective users. All these themes must be considered in concert as well as in individual detail in order to make the hydrologic story complete; that is, to tell of the amounts and quality of water in the rivers that result from the combined actions of people and nature.

The U.S. Geological Survey began a study on the Truckee and Carson Rivers in October 1978 to assess the cause-and-effect relations between human and natural actions and the quality of water at different times and places along the rivers. This study was based on understanding the hydrologic story of the rivers inasmuch as it could be interpreted from past information and from about 3 years of new work. Basically, the study consists of six integrated parts. This report deals with two of the parts: The compilation of existing basic hydrologic data and the presentation of some of the new data collected during the study.

This report describes the fundamental physical elements of the hydrologic story of the Truckee and Carson Rivers. It provides, for example, some of the topographic, flow, and chemical data that define the unique character of the rivers. It includes new data such as the results of recent time-of-travel studies. It also shows revisions of previous data, such as river mileages and drainage areas determined by using new, high-resolution maps. It acts as a guide to locating maps, aerial photographs, computer files, and reports that relate to the rivers and their basins. It describes methods for compiling and expressing hydrologic information, particularly in graphic format for ease of reading and understanding by the many users of water-related data. It establishes a framework for analyzing both rivers together in light of their interbasin connections.

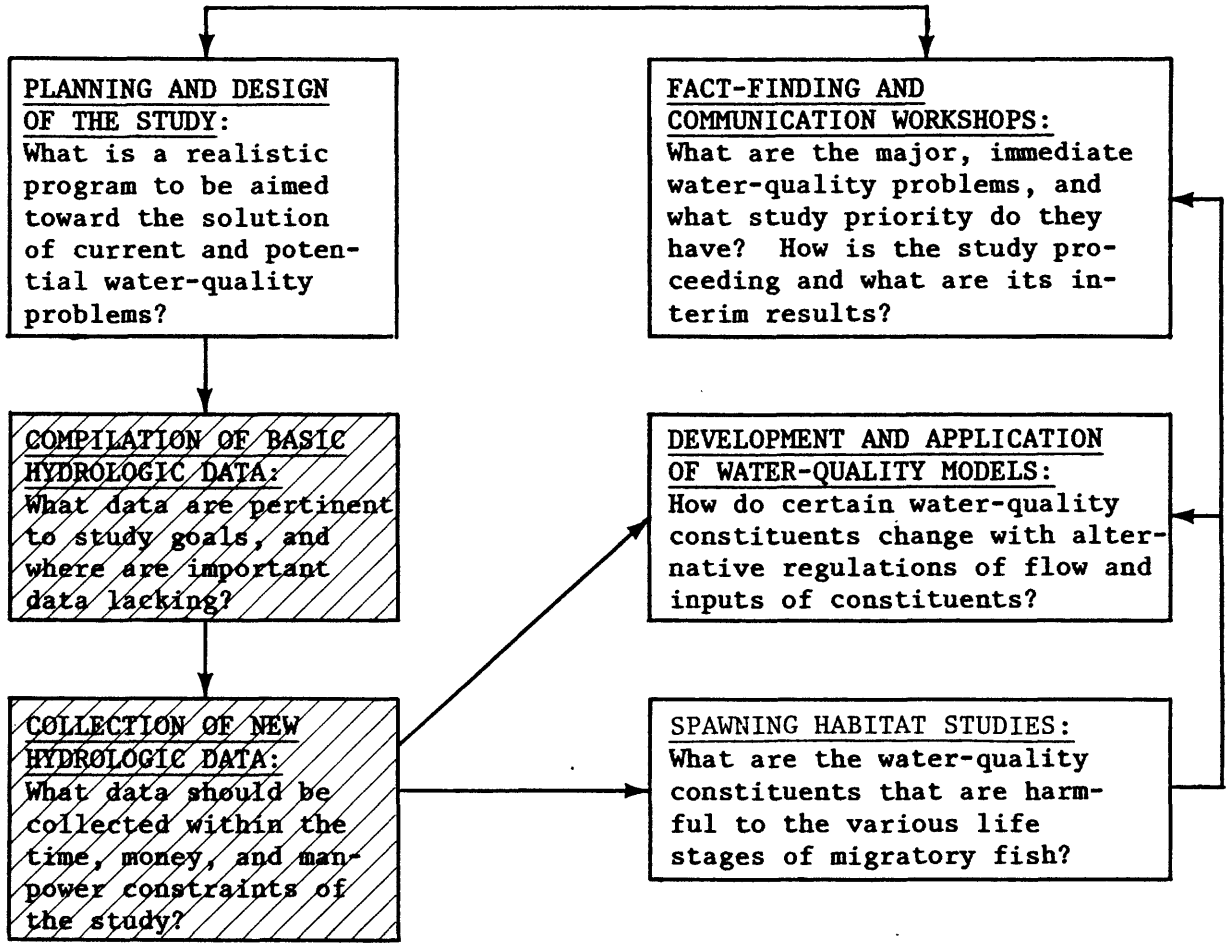
This report consists of three basic parts: Text, tabular data, and plates. The text provides an overview of the hydrologic system, interpretations of data collected for this study, and explanations as to the compilation of the tabular data. The tabular data, attached to the text as supplements, include previously collected and new data brought together in a common format. These supplements are intended to provide users with a single source of comprehensive information about the rivers. The plates include detailed maps and hydrographic plots that represent a synthesis of some of the data listed in the supplements. The text, supplements, and plates are extensively cross-referenced using common river mileages, sampling site numbers, and place names.

INTRODUCTION

In October 1978, the U.S. Geological Survey began an assessment of river quality in the Truckee and Carson River basins. The objectives were (1) to identify the most significant resource-management problems concerning water quality in the two basins, (2) to develop and apply methods to assess these problems, and (3) to communicate the results to the water management community and the general public in an effective and timely manner. The details of the planning and design of the study are explained in a report by Nowlin and others (1980).

The study consists of six integrated parts shown schematically in their relation to each other in figure 1. The planning and design of the study and the factfinding and communication workshops provide the direction for the remaining study elements. The compilation of basic hydrologic data and the collection of new data are fundamental steps toward the planned interpretative work. The modeling and spawning habitat studies represent the specific, intensive technical work to be done as derived from general agreements reached during factfinding and communication workshops.

This report addresses the compilation of basic hydrologic data and the collection of new data, and serves as a comprehensive reference work. The remaining study elements are discussed in reports and other media as planned by Nowlin and others (1980, p. 40).



The Truckee-Carson River-Quality Assessment Study consists of the six integrated elements shown in this schematic. This report addresses two of these elements (shaded). *(FIGURE 1)*

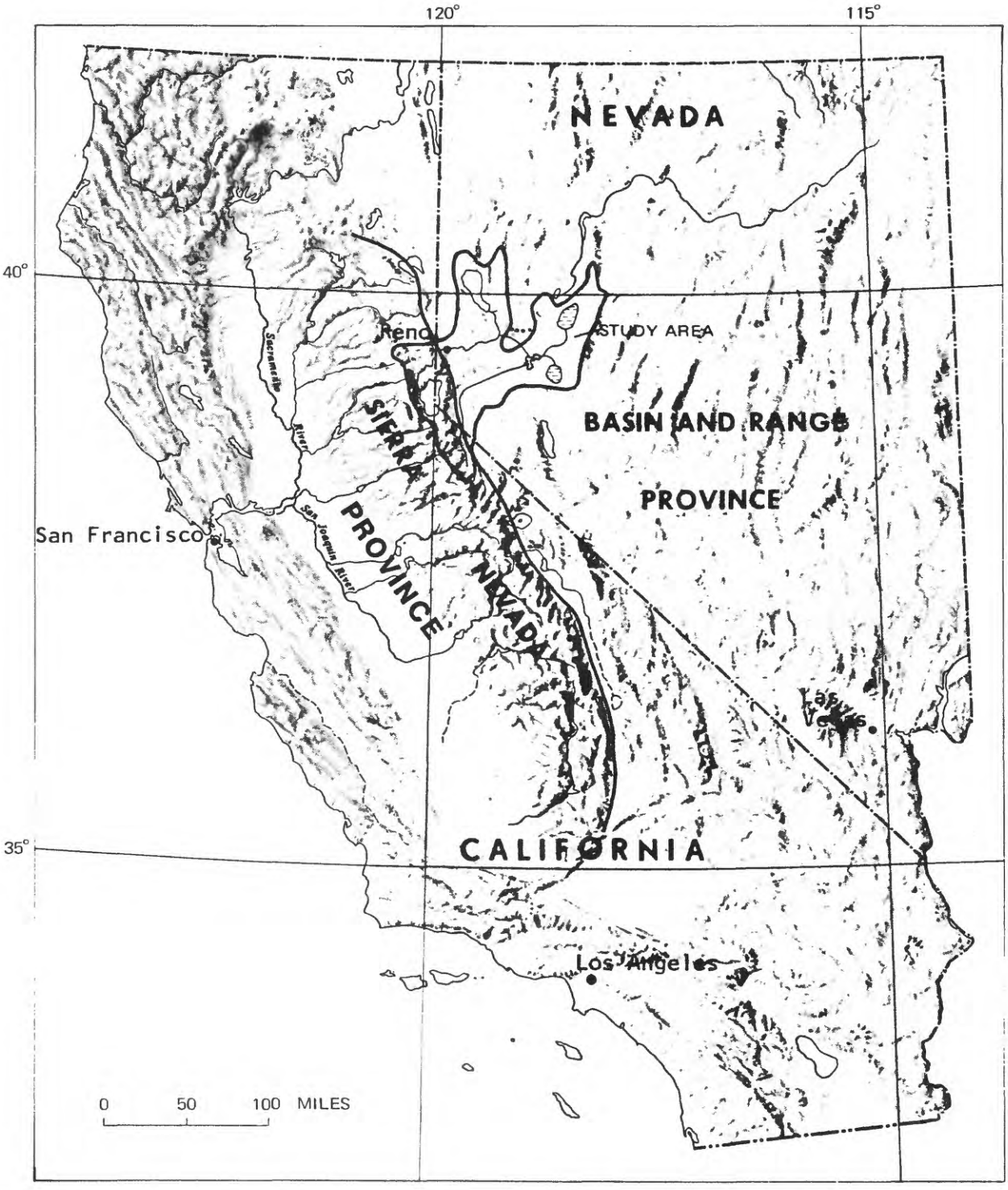
The Area and the Time Periods Considered

The Truckee and Carson River basins lie in eastern central California and western central Nevada (fig. 2), and extend from the crest of the Sierra Nevada near Lake Tahoe to the perimeters of the basins of Pyramid Lake and Carson Sink (fig. 3). This area encompasses 7,257 mi^2 of which about 20 percent is in California and the remainder is in Nevada. The perimeter of this area encloses the entire basins of the Truckee and Carson Rivers, an area near Fernley, Nev., and an area near Topog Peak, Nev. The area near Fernley is hydrologically connected to the basins because of diversions and leakage from the Truckee Canal. The area near Topog Peak is arbitrarily chosen to bound the north-western part of the Carson Sink, although the area is also hydraulically connected to the adjacent Humboldt River basin. There is no specific topographic or hydrologic divide between the terminuses of the Carson and Humboldt Rivers.

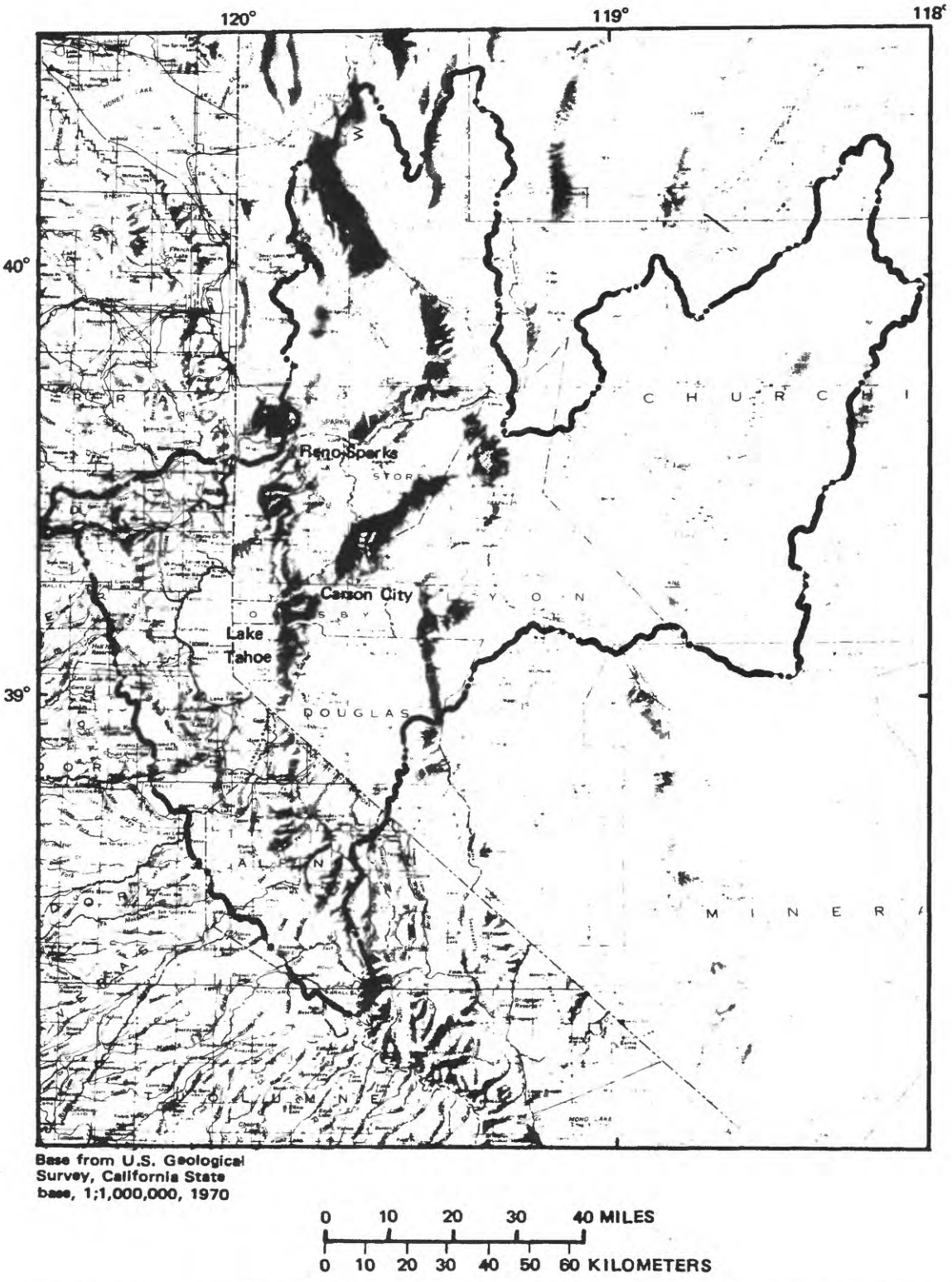
The time frame of this report extends from 1867 through 1980 with an emphasis on 1978-80, the principal period of the collection of new data. The earliest hydrologic data refer to the altitudes of the surface of Pyramid Lake, first referenced by the surveys of Clarence King and Israel Cook Russell in 1867, 1871, and 1882. Flow data for the rivers are included or referenced for various periods beginning about 1890 with the beginning of systematic stream gaging on the East and West Forks of the Carson River and the main stem of the Truckee River. Maps used and referenced herein are the most current versions at the particular scale portrayed, and many features have been added to update the maps to 1979-80 conditions.

An Overview of Basin Topography

The topographic features referred to in the following text are shown on figure 3 and on the large map on plate 1 (pl. 1A). A block diagram of the study area as viewed from the northeast from a high altitude is shown on plate 3. These maps should help the reader visualize the terrain through which the Truckee and Carson Rivers flow.



The Truckee and Carson River basins lie in east-central California and west-central Nevada. The basins include parts of the Sierra Nevada and the Basin and Range physiographic provinces. *(FIGURE 2)*



The Truckee and Carson River basins span the California-Nevada State line, and enclose the built-up areas near Lake Tahoe, Reno-Sparks, and Carson City. *(FIGURE 3)*

The Land and the Rivers

The geologic setting of the basins is dominated by an abrupt north-south division between the Sierra Nevada on the west and the Basin and Range Province on the east (fig. 2). This division is part of a great fault system that extends some 400 miles from south-central California to northeastern California, passing through Nevada just east of Lake Tahoe. The fault system divides granitic rocks on the west from geologically younger volcanic rocks on the east. Vertical movements along the fault system over millions of years have elevated the granitic rocks several thousand feet relative to the terrain to the east, producing a dramatic escarpment along the eastern face of the Sierra Nevada. Part of the escarpment passes through the study area, providing a spectacular mountainous horizon in views westward from Reno, Carson City, and The Carson Valley. To the west of the escarpment the dominant landforms are two ranges of high mountains (peaks over 10,000 feet altitude)--the Sierra Nevada proper and the Carson Range--between which lies the basin of Lake Tahoe. To the east of the escarpment, a string of arid valleys and the vast basins of Pyramid Lake and Carson Sink lie separated by short (about 10-25 miles long), discontinuous mountain ranges.

The Sierra Nevada and the Carson Range are major barriers to the eastward flow of moist air of storms that emanate from the Pacific Ocean. The mountains induce heavy precipitation--as much as 30-60 inches per year--most of which falls as snow at high alitiudes along the Sierran crest. Less moisture falls onto the Carson Range, and comparatively little rain or snow reaches the desert ranges to the east. Mean annual precipitation is 7 inches at Reno, Nev. and generally less than 6 inches in the desert ranges. The Sierra Nevada and the Carson Range therefore are the dominant sources of water for the Truckee and Carson Rivers, whereas the eastern three-quarters of the study area contribute relatively little flow.

Precipitation in the rivers' headwaters is distinctly seasonal, the bulk of the rain and snow falls between November and May. The rivers respond with a characteristic pattern of runoff wherein the highest flows commonly occur in May as the climate warms and springtime temperatures melt the mountain snows (pl. 3). Occasional midwinter floods occur when warm rains from storms spawned in the tropical Pacific Ocean fall on and melt a part of the mountain snowpack.

The water derived from the melting snow is of the characteristic high quality of streams that drain the Sierran granitic rock. The relatively low solubility of the materials through which the rivers initially flow results in water very low in dissolved solids, typically less than 75 mg/L (milligrams per liter). The natural quality of the headwaters is further assured by the general lack of human activity in the areas from which most of the runoff is derived. High flows in the winter and spring carry considerable quantities of suspended sediment--typically more than 1,000 ton/d (tons per day) in the Truckee River at Farad, but the receding flows rapidly clear to reveal cold, transparent pools and whitewater riffles populated by trout and other aquatic organisms that prefer (and therefore indicate) a healthful stream.

The Truckee River exits Lake Tahoe at Tahoe City, Calif. There the level of the lake and the flow of the river are partly controlled by a small dam. This dam at the head of the main stem of the river is used with six additional dams on downstream tributaries to regulate flows of the river as it crosses the California-Nevada State line (pl. 1B). The East and West Forks of the Carson River are virtually unregulated as they pass from their mountain canyons onto the broad Carson Valley floor.

Upon leaving the mountains, parts of the flows of both the Truckee and Carson Rivers are immediately diverted to a myriad of uses dominated by agricultural irrigation from May to November. River water is thus detained in ditches and fields where water temperature increases, and many soluble and suspended materials become entrained before the water returns to the streams. Ground and surface waters (about 45 Mgal/d (million gallons per day) in 1975) are withdrawn for municipal and industrial uses in Truckee Meadows, Eagle Valley, and Carson Valley, and the treated effluent after those uses is then discharged into the rivers at several sites (table 1). Treated effluent (about 10 Mgal/d in 1979) from the basin of Lake Tahoe is pumped to sites near Truckee and to Carson Valley, where most effluent discharges directly to the Carson River and its major tributaries during the nonirrigation season.

Downstream from Reno and Carson City, Nev., the waters of the two rivers commingle at Lahontan Reservoir into which the Carson River flows and about 40 percent of the Truckee River flow is diverted through the Truckee Canal. The remaining Truckee River water flows to the closed basin of Pyramid Lake, the contemporary terminus of the river. Releases and overflows from Lahontan Reservoir pass through a vast agricultural complex of canals, reservoirs, and ditches to be ultimately consumed by evapotranspiration at Carson Lake, Carson Sink, or the Stillwater National Wildlife Refuge.

In summary, the Truckee and Carson Rivers begin as nearly pristine mountain streams and terminate primarily by evaporation into the desert air. The flow of the streams derives mostly from the melting of snow and is a consequence of the interaction of the atmosphere with the great mountain barrier in which the upper basins are formed. Along their courses, the rivers are greatly altered as to their quality and quantity by extensive diversions, some of which cross basin boundaries. The altered hydrologic setting aside from the diversions is dominated by reservoir storage and releases on the Truckee River and at Lahontan Reservoir on the Carson River.

The major sources of treated municipal and domestic sewage are the built-up areas surrounding Lake Tahoe, and in the Truckee Meadows, Carson Valley, and Eagle Valley (Table 1)

[Quantity data compiled from operator records for individula treatment plants]

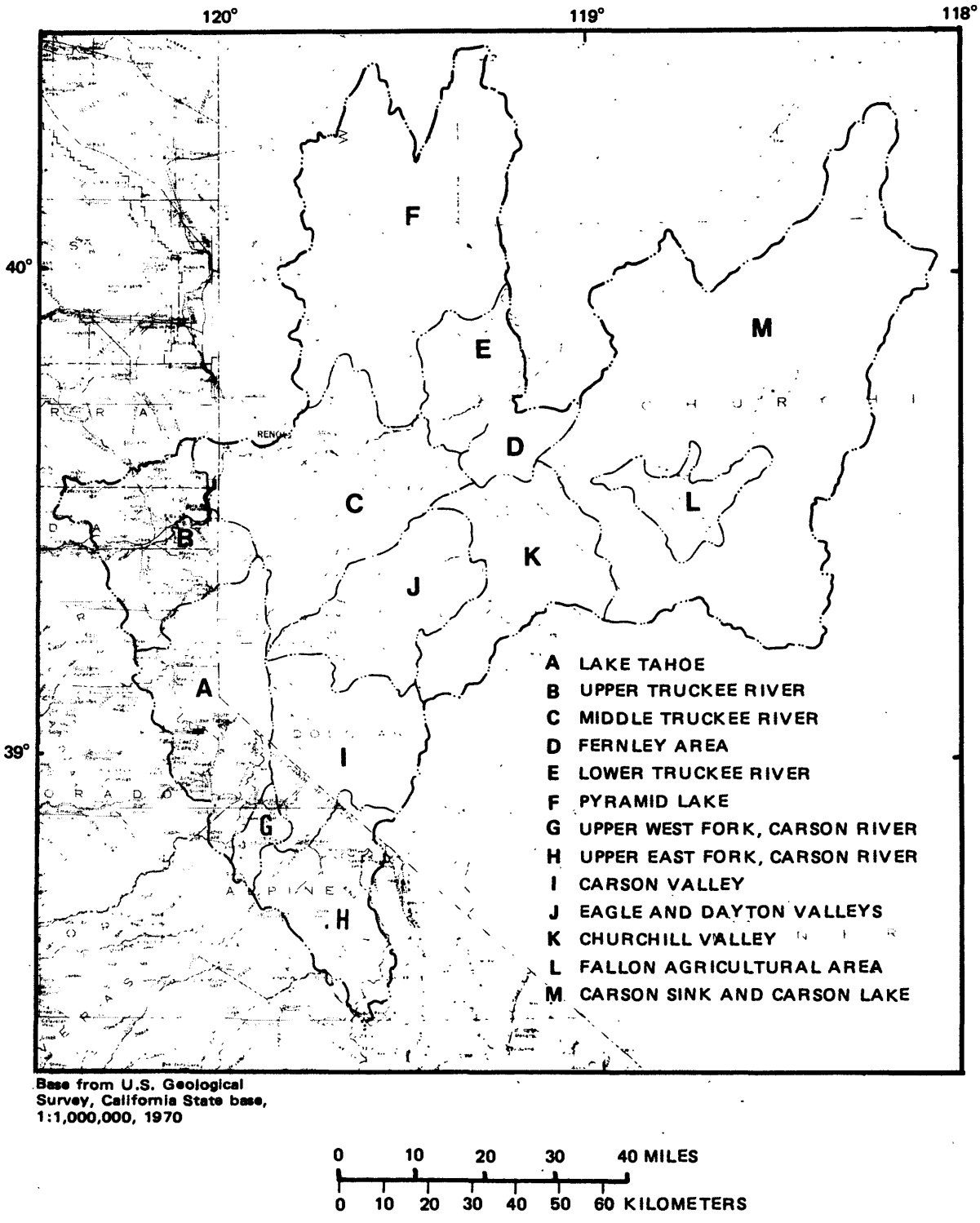
Name	Treatment	Quantity (1979), in million gallons per day	Source or service area	Point of discharge	Hydrologic subunit
Truckee River basin					
Tahoe-Truckee Sanitation Agency.	Tertiary	2.9	West and north shore Lake Tahoe; Truckee, California	Subsurface adjacent to Truckee River and Martis Creek.	Lake Tahoe and upper Truckee River.
Reno-Sparks joint wastewater.	Secondary	18.6	Reno-Sparks area, Nevada	Steamboat Creek, tributary to Truckee River.	Middle Truckee River.
Carson River basin					
South Tahoe Public Utility District.	Tertiary	3.5	South Shore Lake Tahoe, California	Indian Creek Reservoir in headwaters of Carson River. Used for irrigation.	Upper West Fork Carson River and Carson Valley.
Minden-Gardnerville Sanitation District.	Secondary	.7	Towns of Minden and Gardner-ville and adjacent area, Nevada.	Martin Slough adjacent to East Fork Carson River. Used for irrigation.	Carson Valley.
Douglas County Sewer Improvement District (Round Hill).	Secondary	1.2	Southeast Lake Tahoe, Nevada	1968 to 1979 direct to East Fork Carson River. Since 1979, to Williams Slough area for irrigation.	Carson Valley.
Incline Village General Improvement District.	Secondary	3.0	Northeast Lake Tahoe, Nevada	Seasonal land application for irrigation or direct to Carson River at north end of valley.	Carson Valley.
Carson City	Secondary	2.2	Carson City, Nev., and adjacent area.	1.3 Mgal/d used seasonally for irrigating golf course; remainder through Carson ditch to agri-cultural irrigation and Carson River 5 mi down-stream from Carson City.	Eagle and Dayton Valleys.

A FRAMEWORK FOR HYDROLOGIC STUDY

On the basis of water quality, flow, physiography, and human activities, the Truckee and Carson River basins were divided into 13 subunits (fig. 4; pl. 1A). The subunit scheme was developed by the authors with substantial input from attendees at project-planning workshops. This scheme was selected to account for the general intents, purposes, and time restrictions of the U.S. Geological Survey study (p. 2). There are not so many subunits that sampling and modeling efforts would become unwieldly, yet the number of subunits is sufficient to allow an assessment of major, immediate water-quality problems in the basins. The subunits were defined in such a way that their further subdivision for special purposes in the study or in the future could be made with relative ease.

The boundaries of the subunits generally conform to published hydrographic boundaries for consistency with previous work (Rush, 1968). However, an additional boundary between subunits L and M was determined specifically for this study to separate the irrigated agricultural lands surrounding Fallon from the wildfowl habitats of Stillwater National Wildlife Refuge and Carson Lake (fig. 4). Basically this boundary connects the points where water flows into and out of the agricultural areas. These points were determined by inspection of aerial photographs showing agricultural activity and diversions in August 1977. The northern boundary of subunit D represents a sink with inflow mainly from agricultural runoff derived from the Truckee Canal. Thus, subunit D is hydrologically connected to the Truckee River via the canal, although the area is topographically outside the Truckee and Carson River basins. Some water from the western part of subunit D may re-enter the Truckee River as ground-water inflow near Wadsworth. The northwestern boundary of subunit M near Topog Peak was arbitrarily chosen to separate the terminuses of the Carson and Humboldt Rivers which are not separated by a topographic divide. Subunit B, containing the Truckee River and its tributaries between Tahoe City and the California-Nevada State Line, was named the Upper Truckee River subunit for consistency with local terminology (pl. 1A). This should not be confused with a small stream called the Upper Truckee River that flows into the south end of Lake Tahoe and bears no relation to Subunit B.

Subunit boundaries were determined using the most current topographic maps and data available from the U.S. Geological Survey in January 1979. The boundaries were drawn on 1:24,000- and 1:62,500-scale maps, and the areas enclosed were determined to be accurate within 1 percent with respect to the standard accuracy of the maps. The details of the hydrographic boundary and area determinations for the subunits are presented beginning on page 70.



The basins were divided into 13 hydrologic subunits on the basis of study requirements and the input from user workshops. *(FIGURE 4)*

Brief Descriptions of the Hydrologic Subunits

The following brief descriptions indicate the general function of each subunit in a context of sampling and modeling hydrologic phenomena:

Truckee River System

Subunit

A. The Lake Tahoe subunit represents the source of the Truckee River, and all hydrologic inputs within the subunit are integrated into the single outlet at Tahoe City. Flow at the outlet represents a base condition from which flow and water-quality changes downstream can be measured.

B. The Upper Truckee River subunit (see p. 15) contains the dams on Truckee River tributaries between Lake Tahoe and Floriston, Calif., by which flows into Nevada are regulated. Flows near the California-Nevada State line represent the combined effects of storage and releases from six principal reservoirs and Lake Tahoe.

C. The Middle Truckee River subunit contains the major diversions for agricultural, municipal, and industrial uses in the Reno-Sparks area. Flows leaving this subunit represent the effects of those uses on the amount and quality of water that entered Nevada upstream from Reno, and by way of the inflows of small tributaries and ground-water discharge in the Truckee Meadows.

D. The Fernley area subunit contains the Truckee Canal which receives diversions at Derby Dam. The quantity and quality of canal flows represent most of the impacts of water uses in the Reno-Sparks area on the Truckee River contribution to Lahontan Reservoir.

E. The Lower Truckee River subunit represents the conditions of the river downstream from Derby Dam. The quantity and quality of river flows reflect the impacts of water uses in subunits C and D, and the diversions into the Truckee Canal.

F. The Pyramid Lake subunit is included for a final accounting for Truckee River flows. Changes in lake volume and salinity reflect changes in inputs from the river because there is no other significant source of water for the lake.

G. The Upper West Fork Carson River subunit represents one major source of the Carson River. Flow at the subunit boundary at Woodfords represents a base condition from which flow and water-quality changes downstream can be measured.

H. The Upper East Fork Carson River subunit represents the other major source of the Carson River and an area of potential reservoir regulation for the river. Historical flow patterns at the subunit boundary near Gardnerville can be compared with synthesized flows to estimate potential reservoir effects.

I. The Carson Valley subunit contains major agricultural diversions and input points for treated sewage transferred from the Lake Tahoe subunit. Flows leaving the Carson Valley represent the effects of agricultural uses and treated sewage discharge on the flows that entered via the West and East Forks Carson River, inflows of small tributaries, and ground-water discharge.

J. The Eagle and Dayton Valleys subunit contains the Carson City metropolitan area. Flows passing the Carson River gaging station near Fort Churchill include inputs of secondary-treated sewage and urban runoff from Carson City and Eagle Valley, and irrigation-return flows from riparian agriculture within subunit J.

K. The Churchill Valley subunit includes Lahontan Reservoir, the body of water that receives the constituents transported by the Carson River and the Truckee Canal. In the reservoir, those constituents circulate, mix, and change in complex patterns before precipitating to the bottom, where they are consumed by aquatic organisms or move downstream in release flows or spills at Lahontan Dam.

L. The Fallon Agricultural Area subunit contains the city of Fallon and its extensive surrounds of irrigated agricultural fields. Flows emanating from the single source at Lahontan Dam are spread throughout the area, and leave the subunit at many different points. Underlying the area is a lens of freshwater that has accumulated atop the naturally saline aquifer and has existed since diversions from the Truckee River began in 1905.

M. The Carson Sink and Carson Lake subunit represents the terminuses of all flows exiting subunit L. The quantity and quality of these flows, unmeasured in nearly all instances, are reflected in the lakes, ponds, and marshes that irregularly form and evaporate in the wildlife areas around the periphery of subunit L.

Detailed Descriptions of the Hydrologic Subunits

In the following sections, the 13 subunits are described in terms of physiographic, land-use, and hydrologic elements pertinent to water quality. These sections represent a synthesis of current (1980) thinking about water quality in the basins and are a guide to defining problems, processes, and data needs relative to water quality. The boundaries of the subunits are shown in figure 4 and also on plate 1A.

Lake Tahoe (A)

The outlet of Lake Tahoe at Tahoe City is generally considered to be the source of the Truckee River. Although a stream named the Upper Truckee River enters the south end of the lake, the direct connection of that or other streams to the lake outlet is virtually lost within the vast waters of the lake. Thus, the lake outlet was considered a logical dividing point between the many sources of water in the Lake Tahoe basin and the main Truckee River, a composite of waters from those sources.

The subunit encompasses 507 mi^2 of which the surface of Lake Tahoe occupies about 38 percent. Although the lake receives some organic material from streams that feed it, the ratio of the size of the lake to its basin assures that abundant water, almost free of organic material, enters the lake directly as precipitation. Runoff from natural slopes is also relatively low in both dissolved and suspended material. Runoff from logged or built-up areas and roadways is the primary source of larger quantities of dissolved and suspended materials. However, these materials apparently are assimilated in the massive lake and do not reach the outlet in appreciable quantities. Therefore, the Truckee River at its source is of the same high quality as the natural streams that feed the lake.

There is an intensive concern about maintaining the exceptional clarity and other qualities of the lake water. To achieve these goals, municipal and domestic sewage is exported from the basin to sites along the Truckee and Carson Rivers (table 1). Further protection of the lake quality is now mainly dependent upon (1) the control of nonpoint-source materials, such as sediment that is carried by overland runoff from building sites, and (2) increasing the capacity for treatment of sewage produced by an increasing residential and transient population. Changing attitudes and standards for water quality at the sites where the exported sewage is discharged may lead to revised standards for discharges, which along the Carson River, for example, would require an increased level of treatment for certain exported sewage.

Flows leaving Lake Tahoe are regulated at a small dam on the Truckee River near the lake outlet. These flows have been maintained according to the Truckee River Agreement of 1935, and the flow regimen thus imposed is the modern base condition for studies of the quantity and quality of water at sites downstream. This flow regimen and the Truckee River Agreement are discussed in more detail beginning on page 32.

Upper Truckee River (B)

In addition to the outflow from Lake Tahoe, the bulk of the flow of the Truckee River is derived from tributary streams between the lake outlet and the California-Nevada State line. In order to control that flow for allocation to numerous users downstream and to provide protection against downstream flooding, reservoirs were built at six sites on four of the tributaries (pl. 1B). Summaries of reservoir data and reservoir operation are provided beginning on page 32.

All six reservoirs are operated in concert with releases from Lake Tahoe to provide the flows at a site near Floriston, Calif., required by the Truckee River Agreement of 1935. These flows, legally termed the Floriston Rates, are measured at a gaging station, Truckee River at Farad, Calif. (p. 32). On this basis, the area containing the reservoirs and their drainage basins upstream from the Farad gage was chosen as a logical hydrologic subunit, and totals 426 mi^2.

Donner Lake, once an unregulated lake, was converted to a water-supply reservoir by the construction of a dam at the lake outlet to Donner Creek. Martis Creek Reservoir was specifically designed as a flood-control facility wherein a small pool is provided for recreational uses. Prosser Creek Reservoir is a multipurpose facility intended for flood control, recreation, improvement of fishery flows in the Truckee River immediately downstream, and maintenance of Floriston rates.

Independence Lake and Stampede and Boca Reservoirs lie in series along the Little Truckee River. Independence Lake is primarily a water conservation facility holding water intended for power generation and supply for the Reno area. Stampede Reservoir is a multipurpose facility intended to store water for a variety of uses including fish habitat enhancement along the lower Truckee River near Nixon, Nev. Boca Reservoir was designed to furnish a supplemental water supply for downstream agricultural uses near Fallon and for power generation upstream from Reno and at Lahontan powerplant near Lahontan Dam. Between Independence Lake and Stampede Reservoir, there is a small diversion leading from the Little Truckee River to Sierra Valley in the Feather River basin of California.

The regulation of the flows through the reservoirs and in the river involves considerable mixing of waters, according to seasonal downstream needs and such overriding factors as equipment malfunction or imminent flood or drought. Thus, aspects of water quality in the main river are predictable only insofar as the outputs of the regulated tributaries are understood. Otherwise, comparisons of water quality at Farad with that at Lake Tahoe cannot isolate problems to a particular source, but only to the Upper Truckee River subunit as a whole.

Other major water-quality aspects of the subunit relate to effluent discharge at the Truckee-Tahoe Sanitation Agency Water Reclamation Plant near the mouth of Martis Creek and the potential for contaminating spills and runoff along the transcontinental highway and railroad routes that border the river. As of 1980, effluent from the north and west sides of Lake Tahoe, Squaw Valley, and Truckee areas was given tertiary treatment at the plant and discharged into a leach field. From there it percolated to Martis Creek and the Truckee River after an estimated detention period of 3 to 6 months. Highway runoff, containing such constituents as oil, rubber, lead, and the salt applied for ice control, reaches the river untreated, as would spills during accidents. Future protection of river quality in the interest of downstream users is thus dependent upon (1) decisions as to the level of treatment required to accommodate increasing population in the Truckee-Tahoe Sanitation Agency service area, and (2) detention of highway runoff and emergency detention procedures for spills.

Middle Truckee River (C)

Upstream from Floriston, reservoirs are used to regulate flows into the Truckee River. Downstream, diversion dams are used to regulate flows away from the river. Between Floriston and Derby Dam, the endpoints of the Middle Truckee River subunit, approximately 50 diversions leave the river for purposes of power generation, irrigation, and municipal, domestic, and industrial water supply. Except for water leaving the system by such means as evapotranspiration, most of the diverted water returns to the river at points within the subunit. Flow from several small tributaries arising in the mountains southwest of Reno reaches the river directly or through the irrigation systems, as does ground-water discharge in the Truckee Meadows. At Derby Dam, about 35 percent of the average annual flow is diverted out of the Truckee River basin and terminates in the Fernley area, Swingle Bench, and Lahontan Reservoir, thus marking Derby Dam as an endpoint to the relatively closed system that begins at Floriston. The hydrologic subunit so defined encompasses 744 mi^2 and includes the mixed agricultural and urban lands centered on the Reno-Sparks metropolitan area.

Diversions for power generation, of which there are four between Floriston and Reno (pl. 1B), simply carry water in flumes to riverside powerplants. There, the water is returned to the river after passing through penstocks and rotating turbines or through bypass spillways. The principal effect on the river of this activity relates to the removal of a large percentage of the river flow along the diverted reaches during low-flow periods.

Agricultural diversions, exemplified by Steamboat and Orr Ditches (pl. 2B), transport water for tens of miles from the river. The water then flows through a complex pattern of lateral ditches and fields, picking up sediment, nutrients, pesticides, and other materials that potentially issue to watercourses tributary to the Truckee River. Although agricultural return flows may enter the river at other places, the primary returns move by way of North Truckee Drain from the north and Steamboat Creek from the south. These major watercourses also intercept urban runoff that does not otherwise enter the river via storm drains upstream. Minor flows from Galena, Whites, and Steamboat Creeks provide additional water supply for areas south of Reno.

Municipal, domestic, and industrial water supply is carried from the river to treatment facilities by the Steamboat, Highland, Idlewild and Glendale diversions. After distribution and use, the effluent is discharged through a sewage collection system to the Reno-Sparks Sewage Treatment Plant. After secondary treatment at the plant, the effluent is discharged into Steamboat Creek near its confluence with the Truckee River near Vista.

Downstream from Vista, local diversions carry water for irrigation of benchlands adjacent to the river. Exceptions include industrial diversions at Tracy Powerplant and the Eagle-Picher Company plant. Water not consumed by evaporation at the plants is discharged to holding ponds and percolates into the river alluvium, and probably back to the river.

Problems with the water resource in this subunit are typical of rapidly urbanizing areas and are among the most severe in the Truckee and Carson River basins. Water supply is a critical issue as new development competes with downstream interests for the rights to a limited water supply. As agricultural areas of Truckee Meadows and Spanish Springs Valley are turned to urban-suburban uses, new demands for sewage treatment have arisen. Because the existing sewage treatment plant is operating at or above its rated capacity on nearly a full-time basis, many alternatives are being proposed to cope with the burgeoning effluent load. Detention basins for urban stormwater runoff and excess sewage flows are virtually nonexistent, and the risk of raw sewage spills, such as a spill that occurred in June 1980, into the river is great.

Fernley Area (D)

The Truckee Canal begins at Derby Dam and carries water 31.5 miles to Lahontan Reservoir on the Carson River. Along the canal route, about 25 diversions leave the canal for agricultural irrigation and small public water supplies. Return flows from about half of these enter the Truckee or Carson River basins. However, return flows from agricultural fields immediately east of Fernley move northward into a small, closed basin. Thus, this basin is hydrologically connected to the Truckee-Carson system and is considered a separate subunit. The subunit extends from the Truckee-Carson system drainage boundaries to the low point of the closed basin in the Fernley State Wildlife Management Area, and covers about 103 mi^2.

The water budget of the Fernley Area is based upon flows in the Truckee Canal, leakage and diversions from the canal, the ground-water system, and runoff into the canal during rainstorms. Leakage from the Truckee Canal, which is mostly unlined, augments the local ground-water supply as does percolation of diverted water. Agricultural return flows provide the sustenance of wetlands north of the fields to the playa near Interstate Highway 80. Vegetation and open water there became attractive to waterfowl and other animals, and the area was made into a wildlife preserve. A part of the agricultural return flows returns to the Truckee River in the vicinity of Wadsworth, resulting in increased base flows and contributing to the load of dissolved solids in the river.

Water-quality problems are directly tied to the condition of the water in the Truckee Canal. Not only does canal water go to ground water and crops, but local residents also use the canal for swimming and fishing. The future of the water resource for the Fernley Area will be heavily dependent upon decisions reached about water supply and quality in the Reno-Sparks Metropolitan Area, and consequent discharges to the Truckee River and Canal.

Lower Truckee River (E)

Downstream from Derby Dam, the Truckee River flows eastward to Wadsworth and thence northward to its modern terminus at Pyramid Lake. Along this reach, 12 diversions extract water principally for agricultural irrigation of the riverine floodplain and benchlands. Between Derby Dam and Wadsworth, three major diversions from the Truckee Canal add their return flows to the river. Additional water may enter the river along this reach via either of two major spillways from the canal or by ground-water flow from the canal to the river. Otherwise, except for minor local rainfall, the primary source of flow for the subunit is that which passes Derby Dam.

Downstream from Derby Dam, the river channel and its immediate riparian conditions are of great hydrologic interest. Here the river flows mostly on Pyramid Lake Indian Reservation for which attempts are being made (1) to redefine the allocation of Truckee River water in the interest of the sustenance and further development of the local culture, and (2) to reestablish fisheries that declined and failed earlier in this century. Locally, channel migration and bank failures abetted by disturbance of riparian vegetation are a continuing problem.

Below the downstream end of the subunit, the Truckee River enters Pyramid Lake across a broad delta. The interface of the delta and the lake shoreline is migratory, depending upon the volume of flow from the Truckee River, and has moved several miles during this century. In order to provide a stable reference point for hydrographic and other measurements with respect to the river and the lake, Marble Bluff Dam was chosen as the downstream terminus of the subunit.

Marble Bluff Dam was built to aid the reestablishment of fisheries in the Truckee River that declined and failed earlier in this century. The Cui-ui Lakesucker (Chasmistes cujus) and the Lahontan Cutthroat trout (Salmo clarki henshawi) that once spawned in the river now reside only in Pyramid Lake and will not reproduce under current water-quality and flow conditions in the river. A fishway leading from Marble Bluff Dam to the lake allows some of the fish to migrate to fish-handling facilities at the dam whence fertilized eggs stripped from the fish are transferred to hatcheries. The fish may be returned to the Lake or to points upstream in the river. However, reestablishment of continuing Cui-ui and Lahontan cutthroat trout migrations is dependent on several interactive physical and chemical characteristics of the river. These conditions define the ongoing concerns for the subunit.

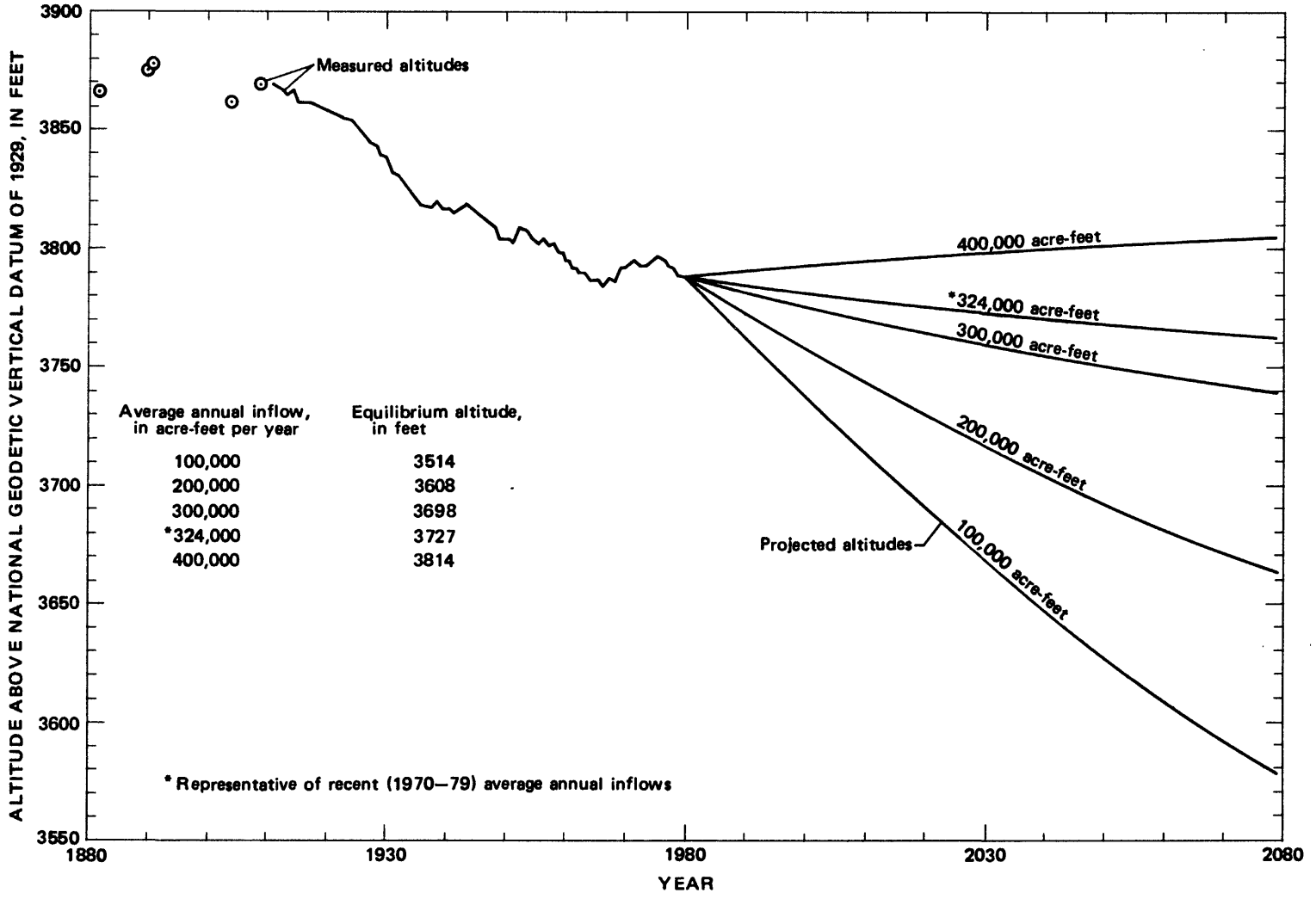
Primary physical concerns involve the volume, timing, and temperature of flows during the spawning season. Because of heavy regulation in the Upper Truckee River subunit and legal uncertainties as to allocation of flows to the lower river, optimum flow conditions needed for the fishery are now difficult to achieve and may continue to be so indefinitely. In addition, mechanisms for routing fish upstream past diversion dams via fish ladders, and screening of fish from diversion canals are still under experimentation. Water-quality concerns have pointed to several constituents and conditions supposedly harmful or lethal to various life stages of the fish, but recent studies (R. J. Hoffman, U.S. Geological Survey, written commun., 1981) have shown that low dissolved oxygen in river gravels may be sufficient in itself to inhibit reproduction by killing eggs and fry.

Pyramid Lake (F)

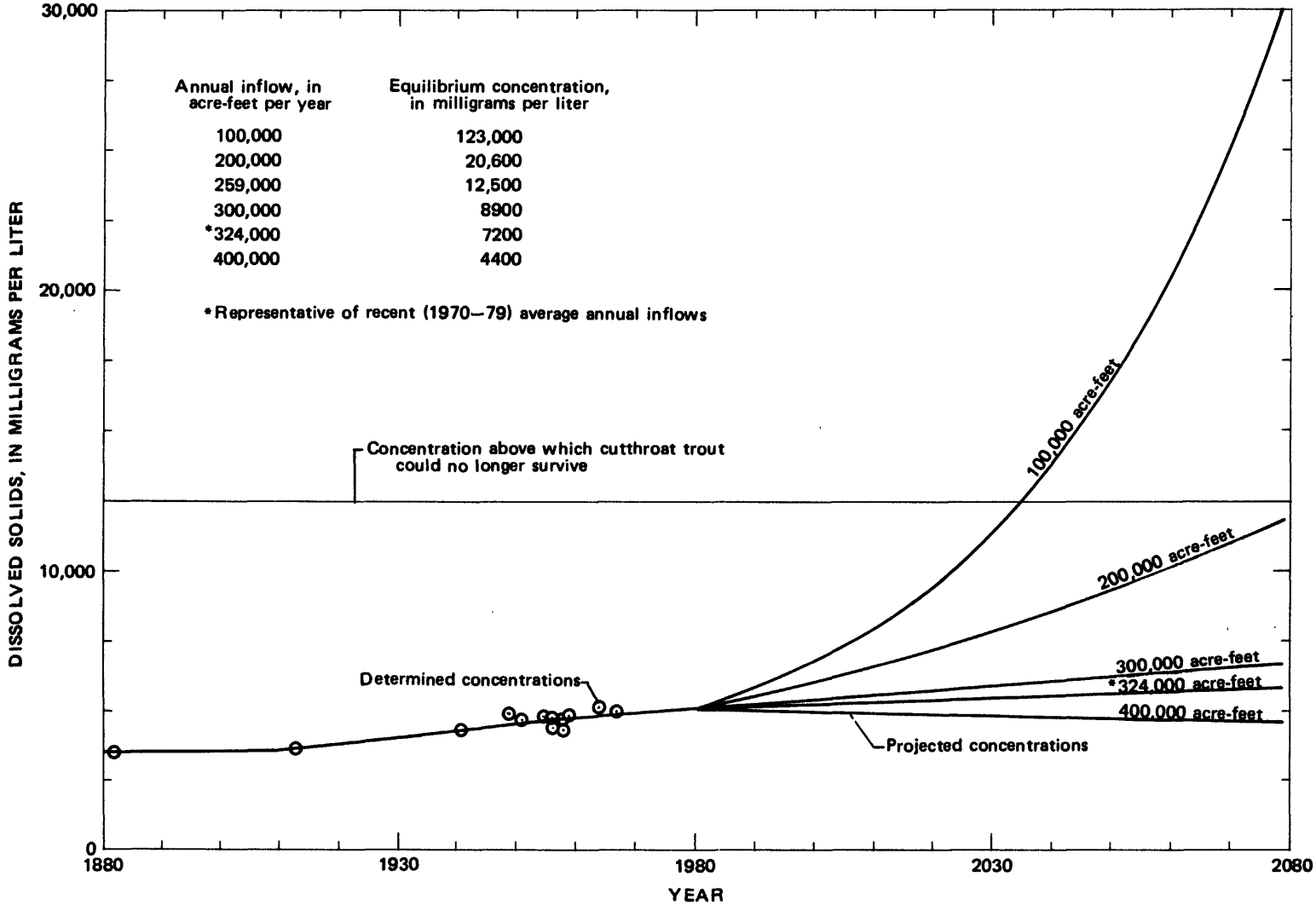
Prior to the 1930's, the Truckee River channel split in the vicinity of Nixon, Nev., and the river flowed into either or both of the topographically closed basins of Pyramid and Winnemucca Lakes. Transbasin diversions, begun at Derby Dam in 1905, diminished the average flows of the river so that both lakes began to recede. By the early 1930's, the river was flowing only into Pyramid Lake, and in 1938 Winnimucca Lake went dry. The level of Pyramid Lake has continued to decline, reaching a 100-year low in 1967 and recovering slightly in the 1970's because of above-average river flows (fig. 5). In the same period, the concentration of dissolved solids in the lake has increased (fig. 6).

Continuing litigation involving water rights for Pyramid Lake, changes in upstream water use, and unknown future climatic conditions make prediction of future river flows to Pyramid Lake impossible. However, estimating lake elevation and dissolved-solids concentrations is possible for a reasonable range of river inflows. It is assumed that additions to the lake are composed entirely of Truckee River inflows plus an average precipitation of 0.56 ft/yr, and that losses are composed of 4 ft/yr of evaporation from the lake surface (Harding, 1935). Figure 5 projects average changes in lake level for a number of average annual flows between 100,000 and 400,000 acre-ft. The curve for 324,000 acre-ft projects elevations on the basis of recent (1970 to 1979) average annual inflows.

Similarly, assuming that the lake presently contains about 140 million tons of dissolved salts, and that salts added by inflow or removed by chemical precipitation represent a negligible percentage of this quantity (Glancy and others, 1972), figure 6 projects average changes in concentration of dissolved solids in the lake. These estimates suggest that for average annual river flows of less than 260,000 acre-ft (equilibrium lake levels below 3,660 feet), concentrations of dissolved solids would eventually exceed the reported tolerance limit for cutthroat trout of 12,500 mg/L (Taylor, 1972). Concentrations above 12,500 mg/L could be expected occasionally at average inflows above 260,000 acre-ft because of the large variability in annual river flow.



The water-surface altitudes of Pyramid Lake, measured systematically since 1911, show a long-term declining trend with periods of gain related to above-average flows of the Truckee River. Projected water-surface altitudes are based on selected annual inflows, precipitation, and evaporative losses. *(FIGURE 5)*



As the inflow to Pyramid Lake decreases, the dissolved-solids concentration increases. *(FIGURE 6)*

Upper West Fork, Carson River (G)

The West Fork Carson River upstream from Woodfords, Calif., supplies about 25 percent of the average annual flow reaching the Carson Valley. The flow emanates mainly from snowmelt in mountainous and alpine meadow terrain lying mostly above the 7,000-foot altitude of Hope Valley (pl. 1A). The terrain is sparsely settled, much of it consisting of National forest land, where principal activities are recreation and grazing. The river headwaters are controlled to a limited extent by several small dams that were built at outlets of natural lakes. Water thus stored is released in late summer for irrigation in Carson Valley. Irrigation diversions in upland meadows are used to water grasslands for grazing, but the hydrologic effects of these diversions are considered to be minor.

Major irrigation diversions begin in the vicinity of Woodfords where significant quantities of West Fork water are transferred to the Indian Creek basin and other large areas away from the river (pl. 2A). Thus, the gaging station at Woodfords was considered a logical terminus for the Upper West Fork subunit. The quantity and quality of the water measured there define the base conditions from which downstream changes can be determined.

Upper East Fork, Carson River (H)

The East Fork Carson River upstream from Dresslerville, Nev., supplies about 75 percent of the average annual flow reaching Carson Valley. Upper reaches of the drainage are characterized by rugged, sparsely-settled mountainous terrain containing several large alpine meadows and many small lakes. As on the West Fork, most of the lakes have been dammed at their outlets to gain additional water storage (total capacity, about 5,000 acre-ft) for summer releases to irrigation uses downstream. The lower reaches of the drainage include significantly drier areas blocked from moisture by the great Sierran escarpment. There, the river runs through a rugged, whitewater canyon favored by increasing numbers of people for fishing and river touring.

Various major control structures, principally water-storage facilities, have been proposed for the subunit. The principal hydrologic considerations relate to potential flow conditions under the influence of these facilities, primarily the proposed Watasheamu Dam near Horseshoe Bend (pl. 2A). The water quality is known to be impaired by acid mine drainage from Leviathan Mine via Bryant Creek and by possible seepage from septic tanks plus overland runoff from agricultural fields in and near Markleeville.

Carson Valley (I)

This subunit includes 464 mi^2 of mountainous, hilly, and flat-lying terrain, the last of which is mostly used for agriculture (pl. 2A). The hydrology is governed by virtually uncontrolled springtime high flows of the East and West Forks of the Carson River in the southern parts of the subunit, and thence by the main Carson River in the northern parts. Inflow from several small tributaries draining the mountains west of Carson Valley, including Daggett and Clear Creeks, and ground-water discharge in the valley add to the flows in the subunit. Lower flows during the summer irrigation season are regulated by about 130 agricultural diversions and the consequent return flows that reenter the main river by surface conveyances or ground-water seepage. Treated sewage effluent enters the subunit at several points depending upon the season (pl. 1A), and rapid suburban expansion is creating dispersed sources of septic-tank discharge to the ground-water system underlying the valley. Floodflows commonly erode the river banks and beds in the valley alluvium, damaging diversion dams and other structures, and eliciting a response of bank stabilization activity and other channel modifications by water managers.

The entire subunit drains to a point southeast of Carson City where the Carson River enters a short canyon south of Prison Hill. A gaging station in this canyon, Carson River near Carson City (10311000), was chosen as the terminus of the subunit. Measurements at this station would allow the estimation of the gross effect on the river of Carson Valley activities as compared to the influent conditions of the East and West Forks.

Eagle and Dayton Valleys (J)

Carson City, a rapidly growing urban-suburban complex, occupies most of Eagle Valley, west of the Carson River. The city draws its water supply from small streams draining the mountains to the west and from wells tapping the ground water that underlies the valley. After use, the treated portion of the water is used for agricultural irrigation or discharged to the Carson River via Carson Ditch that enters the river just upstream of its major bend to the east (pl. 2A). Some of the treated effluent is transported to the northeastern part of Eagle Valley where it is used to irrigate a golf course. Ground-water discharge tends to reach the Carson Ditch, as does storm-generated surface runoff. Thus, with respect to the Carson River, the ditch acts as a point source of untreated urban runoff and secondary-treated sewage. Agricultural return flows from the Mexican Ditch irrigation system also enter the river in the vicinity of Carson Ditch.

Downstream from Eagle Valley, the Carson River flows through Brunswick Canyon, the site of several water-powered, pre-1900 mills for silver and gold ore mined from the Comstock Lode at Virginia City. Mercury from the milling processes was entrained in river sediments and remains as a potential contaminant between Brunswick Canyon and Lahontan Reservoir. Sewage discharge from the community of Dayton is held for evaporation in ponds with sealed bottoms designed to prevent percolation into river alluvium. Between the mouth of Brunswick Canyon and Lahontan Reservoir, seven diversions carry water to riparian agricultural lands from which agricultural return flows reenter the river. Suburban developments east of Dayton and north of the Carson River are served by ground-water supplies, and discharge effluents via septic tanks. There is no apparent hydrologic connection between these developments and the river, with the exception of a few homes and farm buildings on the river benchlands and floodplain east of Dayton.

A gaging station near Fort Churchill (10312150) provides a convenient site for measuring the outputs of Eagle and Dayton Valleys and virtually the total Carson River inputs to Lahontan Reservoir. Thus, the subunit encompasses the drainage area between the outlet of Carson Valley and the Fort Churchill gage, an area of 417 mi^2, most of which is arid terrain. In this area, the Carson River receives little additional tributary runoff so that discharges from Eagle Valley are the only major sources of additional flow. This is significant in that total flow tends to decrease as the river flows out into the arid valleys away from the mountains, whereas the concentrations of potential contaminants increase. Therefore, dilution effects that occur in rivers in which flow continuously increases with distance downstream are not possible here.

Churchill Valley (Lahontan Reservoir) (K)

Lahontan Reservoir is the only major detention structure on the Carson River and is the terminus of the Truckee Canal. It is a sink for constituents transported by the two watercourses, excepting those diverted from the canal upstream from its terminus (pl. 2C). Other drainage to the reservoir from the arid subunit in which it lies may be considered insignificant. Importantly, the reservoir is an ecologically sensitive water body where results of separate management decisions made in the two river basins come together.

Nearly all flows entering the reservoir are regulated by releases through a valve system at the base of Lahontan Dam, and flows over the spillways are generally prevented if possible by making planned releases through the valve system and by use of flash boards. Basic operation of the reservoir consists of maintaining space to store possible floodflows until early spring, and then beginning to store as much water as possible in anticipation of the summer irrigation season. When the reservoir is nearly full in late winter and an abundant snowpack remains on the mountains, heavy releases are made to the Carson River channel and canals downstream.

The water quality is of significant concern because the reservoir is the most heavily used recreational water body in western Nevada, excepting perhaps the Nevada section of Lake Tahoe. Boating, fishing, swimming, and camping dominate the recreational uses, and problems with water contact have become serious in recent years. The reservoir receives large inputs of nutrients carried from the numerous upstream sources discussed in previous sections, and algal blooms, often toxic to fish, commonly result from nutrient loading. During severe algal blooms in 1980, floating algal clumps and dead fish along the shoreline rendered the reservoir offensive for most recreational uses, and the reservoir was closed to all uses.

Potentially toxic spills, such as untreated overflow from upstream sewage treatment plants, cannot be detained on the Carson River and move directly to the reservoir. Sewage overflows from the Reno-Sparks Sewage Treatment Plant may be shunted to the lower Truckee River by closing the Truckee Canal gates at Derby Dam, provided that the problem is recognized in time. Potentially toxic mercury, carried from pre-1900 mill sites in Brunswick Canyon on the Carson River, resides in reservoir sediments and biota. Mercury concentrations exceed Federal standards for contamination of fish flesh in certain fish in the reservoir (Van Denburgh, 1973).

Fallon Agricultural Area (L)

Between Lahontan Dam and the vast alkaline flats of Carson Sink lies a large area given to agricultural uses (pl. 2A). Diversions from the Truckee Canal downstream from the Fernley farm area and releases from Lahontan Reservoir are used to water the area through an extensive system of canals and secondary storage basins. The excess water spread upon the former desert has contributed to a high ground-water table and numerous shallow ponds and sloughs. The ground water of concern is a freshwater lens that has formed atop the pre-existing saltwater aquifer. The fresh ground water, representing partly the effects of water diverted from the Truckee River, is used as a source of domestic supply by the ranch community surrounding Fallon. Therefore, the rural Fallon area has become dependent upon a water source created and maintained by irrigation operations involving the interbasin transfer of water. By contrast, the city of Fallon and the nearby U.S. Naval Air Station pump water from a deeper, basaltic aquifer which in turn is recharged by freshwater moving downward from surface and near-surface sources.

The future conditions of the ground-water supply and quality are based on several factors. Seasonal irrigation quantities vary with the water supply available from Lahontan Reservoir, and shallow aquifer water levels vary greatly depending upon the quantities of flow released. Flows from the reservoir, in turn, depend upon moderately prolonged wet or dry periods for the two river basins and management of flows in the Truckee Canal and at Lahontan Dam. Changes in the allocation of flows to the Truckee Canal, operations at Lahontan Dam, and future operations at proposed facilities upstream on the Carson River all would potentially change the characteristics of the shallow ground-water supply. In addition, increased pumping for agricultural, municipal, and domestic use in the Fallon area could create overdraft and possible deterioration of water quality under certain conditions. Arsenic, probably naturally occurring in the near-surface alluvium, is a common contaminant in water throughout the area, and the shallow aquifer is particularly vulnerable to pollutants associated with domestic and agricultural practices.

Surface water is routed through the Fallon agricultural area first via the Carson River channel itself and major canals emanating from the Carson River Diversion Dam (pl. 2A), and thence via numerous lateral systems. As in the Carson Valley, some lateral ditches terminate in holding reservoirs from which releases are regulated during the irrigation season. The dominant mode of irrigation is the diversion of water through gates off the lateral ditches for direct flooding of fields. Early spring releases at Lahontan Dam to provide space for floodwater storage may precede the irrigation season. The released water then travels down the Carson River channel to Carson Sink, the "T" Canal to Carson Sink, and the "V" Canal to Carson Lake.

Carson Sink and Carson Lake (M)

Routing water through the Fallon Agricultural Area is a complicated procedure having significant implications as to wildlife reserves around its periphery. Historically, the Carson River flowed into a system of branching channels that carried water to basins north and south of the present site of Fallon. These basins were apparently often filled with water, and were shown on early maps as the North and South Carson Lakes (Russell, 1885, pl. 6). North Carson Lake was also fed by flows from the Humboldt River prior to the damming and other development of that watercourse. These prominent water bodies, together with many others along a north-south axis east of the Sierra Nevada, provided major feeding and breeding areas for vast numbers of migratory wildfowl. The modern situation of extensive diversion and consumption of water has caused the depletion or virtual disappearance of these water bodies, with consequent adverse effects on the viability of the wildfowl habitat.

Routing water through the agricultural areas has produced in place of North and South Carson Lakes a complex of reservoirs, ponds, sloughs, and marshlands surrounding Fallon (pl. 2B). South Carson Lake has been considerably reduced in size to a relatively well-defined body of water and marshland presently called Carson Lake or Carson Pastures. North Carson Lake, presently called Carson Sink, is nonexistent as a water body with definable boundaries, although spills and large releases at Lahontan Dam during wet periods reach Carson Sink. Water that would flow to the historical site of the lake has instead been directed to numerous small sinks and reservoirs north and east of Fallon (Stillwater National Wildlife Refuge). Carson Lake (Carson Pastures) and the many other small water bodies now constitute the wildfowl feeding and breeding areas.

Water reaching the wildfowl areas is that remaining after all upstream uses have been satisfied. Therefore, periods of drought, increased upstream consumption, or reallocation of flows through the Truckee Canal threaten to diminish further the average supply of water available to the wildfowl areas.

HOW THE HYDROLOGIC SYSTEM WORKS

The following sections discuss some of the detailed constructs developed for flow and water-quality modeling. As such, they provide a substantial insight into some key parts of the hydrologic system and act as useful reference materials for future studies. The sections are extensively cross-referenced with information on the plates and in the supplemental data, and should be used with the plates for locating referenced features.

The Hydrologic Budget

To aid in understanding the hydrologic system, a preliminary water budget was compiled for the 13 subunits (table 2). This budget is based on streamflow data for 1970-79 at selected stations, and precipitation, ground-water-discharge, and evaporation data for other periods. Streamflow data for principal stations are also included on plate 3. As of 1981, there was no common period for which all budget data could be compiled for all subunits simultaneously. Nevertheless, table 2 is a useful guide to the significant inputs and outputs of water throughout the system.

For the Lake Tahoe subunit (A), Crippen and Pavelka (1970, p. 35) show an annual budget based on data for 1901-66. Assuming that the inflow to Lake Tahoe plus direct precipitation on the Lake (524,000 acre-ft/yr) applies for 1970-79, evaporation from the lake surface would be about 340,000 acre-ft/yr, given that about 187,000 acre-ft/yr flowed out of the lake into the Truckee River. About 9,000 acre-ft/yr of treated sewage are discharged to the Carson Valley subunit (I) from sources in Subunit A.

In addition to the outflow from Lake Tahoe, flows of 216,000 acre-ft/yr were derived from gaged tributaries in subunit B. Because the outflow from subunit B was 539,000 acre-ft/yr, about 140,000 acre-ft/yr must have been derived from ungaged sources.

The inflow to subunit C is supplemented by about 63,000 acre-ft/yr of surface- and ground-water discharges (Van Denburgh and others, 1973). Outflow for the subunit, on the Truckee River and Truckee Canal measured downstream from Derby Dam, was about 515,000 acre-ft/yr. Therefore, about 90,000 acre-ft/yr was lost within the subunit, and most of the loss probably was evapotranspiration in the Truckee Meadows.

For the Fernley area (D), about 208,000 acre-ft/yr flowed through the Truckee Canal upstream from Fernley. About 6,000 acre-ft/yr was discharged as surface and ground water to the closed basin northeast of Fernley, and about 4,000 acre-ft/yr was discharged to subunit E. Discharge of the Truckee Canal downstream from Swingle Bench was about 159,000 acre-ft/yr, indicating losses of 40,000 acre-ft/yr, most of which probably was evapotranspiration in the Fernley Farm area and on Swingle Bench. About 10,000 acre-ft/yr was estimated to flow into subunit L from the Truckee Canal between Swingle Bench and Lahontan Reservoir.

The hydrologic budget for the Truckee-Carson system is approximated on the basis of streamflow, precipitation, ground-water discharge, and evaporation data (Table 2)

[Data in thousands of acre-feet per year]

Subunit symbol and name	Inflow, main stream (1970-79 water years)	Additions within subunit	Outflow, main stream (1970-79 water years)[1]	Difference[2]
A Lake Tahoe	--	[3]524	187	-340
B Upper Truckee River.	187	[4]216	539	+140
C Middle Truckee River.	539	[5]63	515	-90
D Fernley Area	208	[5]Minor	159	-40
E Lower Truckee River.	307	[5]11	[6]324	+10
F Pyramid Lake	[6]324	[5]Minor	0	[7]-324
G Upper West Fork, Carson River.	--	--	75	--
H Upper East Fork, Carson River.	--	--	241	--
I Carson Valley	309	[8]50	257	-100
J Eagle and Dayton Valleys.	257	[8]23	251	-30
K Churchill Valley (Lahontan Reservoir).	[9]392	[8]2	346	-50
L Fallon Agricultural Area.	346	[5]10	[10]21	-330
M Carson Sink and Carson Lake.	21	[8]4	0	-30

[1]Not included are evapotranspiration and deep percolation to ground water.

[2]Difference is computed as (outflow)-(inflow)-(additions) and rounded to nearest 10,000 acre-feet. Negative numbers indicate a net consumption within the subunit.

[3]Crippen and Pavelka, 1970, p. 33-36. Estimated based upon 1901-66 water years.

[4]Measured additions only. Difference for this subunit represents ungaged inflows.

[5]Van Denburgh and others, 1973. Estimated based upon 1919-69 water years.

[6]Estimated 8,000 acre-feet per year losses through Indian Ditch system (diversions at Numana Dam).

[7]Lake volume decreased an average of 42,000 acre-feet per year (1970-79). This volume, added to inflow, indicates an average evaporation of 366,000 acre-feet per year.

[8]Glancy and Katzer, 1975. Estimated based upon 1919-69 water years.

[9]Estimated about 8,000 acre-feet per year returned from Buckland Ditch system.

[10]Estimated on the basis of partial records, and does not include flows to Carson Lake.

For the Lower Truckee River (E), surface-water inflows from the Truckee River and Truckee Canal were about 307,000 acre-ft/yr. Ground-water inflow was an estimated 11,000 acre-ft/yr. Discharge at Truckee River near Nixon (10351700) was 332,000 acre-ft/yr, and estimated losses in the Indian Ditch system after diversion at Numana Dam were 8,000 acre-ft/yr. These figures indicate a net addition of 10,000 acre-ft/yr, but the source of this water cannot be resolved using the existing data.

Average annual flow at the Nixon gage less losses to the Indian Ditch system was used as the inflow to the Pyramid Lake subunit (F). A decrease in the lake volume of 42,000 acre-ft/yr thus indicates an estimated evaporative loss of 366,000 acre-ft/yr from the Lake surface.

For the Upper West Fork, Carson River subunit (G), surface-water outflow of 68,000 acre-ft/yr plus about 7,000 acre-ft/yr of ground-water discharge composed the total inflow from that subunit to the Carson Valley subunit (I). An additional 241,000 acre-ft/yr was discharged to subunit I from the Upper East Fork, Carson River subunit (H). Additions within subunit I included the discharges of tributary streams and sewage effluent derived from subunit A. Outflows from subunit I were 257,000 acre-ft/yr, indicating losses of 100,000 acre-ft/yr, most of which probably is evapotranspiration.

Carson River inflow to the Eagle and Dayton Valleys subunit (J) was supplemented by about 23,000 acre-ft/yr of surface- and ground-water discharge, primarily from Clear Creek and Eagle Valley. About 16,000 acre-ft/yr was diverted into Buckland Ditch, of which an estimated 50 percent returned to the Carson River in subunit K. Measured discharge at Carson River near Fort Churchill was 235,000 acre-ft/yr, indicating losses in subunit J of 30,000 acre-ft/yr, presumably to evapotranspiration from Eagle Valley and agricultural fields along the river downstream from Dayton.

Flows into the Churchill Valley (Lahontan Reservoir) subunit (K) from the Carson River and Truckee Canal were about 392,000 acre-ft/yr, including an estimated 8,000 acre-ft/yr returning from Buckland Ditch. Outflow from Lahontan Reservoir was about 346,000 acre-ft/yr, suggesting losses of 50,000 acre-ft/yr to evaporation from the reservoir. Katzer (1971) estimated evaporative losses of about 50,000 acre-ft/yr based on pan evaporation figures provided by the U.S. Bureau of Reclamation in 1970.

Outflows from Lahontan Reservoir plus flows into subunit L from the Truckee Canal downstream from Swingle Bench equal about 356,000 acre-ft/yr. There is no complete accounting for flows into the Stillwater and Carson Sink areas (pl. 1A), but partial records at several stations on distributaries to these areas indicate discharges in excess of 21,000 acre-ft/yr. The 330,000 acre-ft/yr difference is attributable to recharge of the shallow ground water aquifer in the Fallon area, evapotranspiration in subunit L and at Carson Lake, and unmeasured flows to the Stillwater and Carson Sink areas. Estimated surface- and ground-water inflows to these areas of 4,000 acre-ft/yr plus the discharge of distributaries flowing into subunit M suggest losses to evapotranspiration in excess of 25,000 acre-ft/yr (rounded to 30,000 acre-ft/yr in table 2).

Operating Procedures for Major Reservoirs

Managing flow in the rivers is a complex procedure based primarily on the integrated operation of eight reservoirs (table 3). The operation is dictated by mandates to maintain specified minimum and maximum flows measured at key points on the Truckee River. These flows and the operation of the reservoirs to meet them derive from long-term experience with the system and decades of litigation. Nevertheless, the operation of the reservoirs remains a major subject of controversy, and pending litigation seeks further changes in operating procedures. The following discussion describes the current (1980) operations, and is based upon legal documents, discussions in two workshops sponsored by the Truckee-Carson River-Quality Assessment, and consultations with the Federal Water Master, Reno, Nev. The Federal Water Master is primarily responsible for reservoir operation and directing most of the allocation of water throughout the Truckee-Carson system. Water in three reservoirs is privately owned, as indicated in table 3, and may be used according to the owner's decrees. Analyses of the decrees and institutions governing the water resource are beyond the scope of this report.

Specified Flows

The principal specified flows on the Truckee River are the Floriston rates and a flood indication flow. The Floriston rates were established by a Federal District Court decree in 1915 and were to be measured at a gaging site near Floriston, Calif. In 1935, the rates were revised and their place of measurement moved to the gaging station Truckee River at Farad, Calif. (10346000). The rates are keyed to the water-surface altitude at Lake Tahoe Dam and the irrigation season (table 4 and fig. 7). The decree establishes the rates as minimum flows. Meeting downstream water rights during the entire irrigation season, however, commonly prevents the Water Master from significantly exceeding these rates. Rates are occasionally exceeded during releases of privately owned water, releases for storage in Lahontan Reservoir, and releases to create flood storage space in upstream reservoirs.

When a flow at the gaging station Truckee River at Reno, Nev. (10348000), exceeds 6,000 ft^3/s, the Federal Water Master must begin flood storage in four reservoirs (table 3) which continues as long as the flow exceeds 6,000 ft^3/s. Thus, 6,000 ft^3/s has been established as the flood indication flow. When the reservoirs are unable to provide enough storage, minor river flooding begins in the Reno-Sparks area at a flow just above the channel capacity of about 6,000 ft^3/s, and major flooding occurs at about 10,000 ft^3/s.

The factors affecting the integrated operation of major reservoirs in the Truckee and Carson River basins indicate the complexity of the system (Table 3)

Reservoir name[1]	Minimum outflow (ft^3/s)	Maximum outflow[2] (ft^3/s)	Flood storage reserve for indicated time period[3] (acre-ft)	Priority of storage[4]	Priority of release[5]	Usable volume[6] (acre-ft)	Date of beginning of operation
Lake Tahoe	[7]50-70	2,500	--	[8]3	[9]2	744,600	[10]1913
Donner Lake	0	700	7,300 - Nov 15-Apr 15	1	([11])	9,500	[10]1943
Martis Creek Lake	Inflow	620	19,600 - year around	flood only	--	19,600	1972
Prosser Creek	5	1,950	20,000 - Nov 1-Apr 10	[12]4,8	[7]3	28,640	1963
Independence Lake	3	300	--	[13]2 [14]6	([11])	17,500	[10]1937
Stampede	[15]30 or inflow	2,740	22,000 - Nov 1-Apr 10	[8]7	([16])	221,500	1969
Boca	0	900	8,000 - Nov 1-Apr 10	[8]5	[9]1	40,900	1938
Lahontan	0	3,000	[17]80,000 - Nov 1-Mar 1	[18]3	--	[19]295,150	1914

[1]See plate 1B, for schematic relation of reservoirs to each other, and for other reservoir data.

[2]Indicates outflow that can be regulated up to conditions of flow over spillway.

[3]Flood storage reserves are maintained in decreasing amounts until as late as July, depending on runoff predictions. Flood storage is used whenever flow at Truckee River at Reno gage (10348000) exceeds 6,000 ft^3/s.

[4]Priorities under flood conditions are ignored.

[5]To maintain Floriston rates (p. 32), water is drawn from the reservoir as possible in this order.

[6]Best available data based on records or reservoir operators and the Office of the Federal Water Master, Reno, Nev. (1979).

[7] If equivalent rates of flow can be stored in Prosser Creek Reservoir, releases from Lake Tahoe will be 70 ft^3/s from April 1 to November 1 and 50 ft^3/s for the rest of the year (p. 34). Prosser Creek Reservoir's priority of release pertains only to water stored in this manner.

[8]When Floriston rates are exceeded as much water as possible is stored.

[9]When the elevation of Lake Tahoe drops below 6,225.5 feet, the release priorities of Lake Tahoe and Boca Reservoir are exchanged.

[10]Storage occurred earlier; date indicates entrance into the integrated operation.

[11]Privately owned water is not used to maintain indicated rates (p. 37). Sierra Pacific Power Company and Truckee-Carson Irrigation District acquired storage rights for Donner Lake water in 1943 from Donner Lake Company. Sierra Pacific Power Company acquired storage rights for Independence Lake water in 1937.

[12]Truckee-Carson irrigation district acquired storage rights for Lahontan Reservoir in 1926 from the U.S. Bureau of Reclamation. Storage of this priority is related to the flow rates that can be released from Lake Tahoe, and may not exceed 70 ft^3/s from April to November, and 50 ft^3/s for the rest of the year (p. 34).

[13]Storage up to 3,000 acre-feet.

[14]Storage up to 14,500 acre-feet.

[15]If contents is greater than 5,000 acre-feet, then 30 ft^3/s is the minimum; otherwise, the outflow may equal the inflow.

[16]Rate of release is determined by the Secretary of the Interior.

[17]Temporary restrictions until modifications to the dam are completed.

[18]Storage rate is limited by the rate of flow diverted through the Truckee Canal.

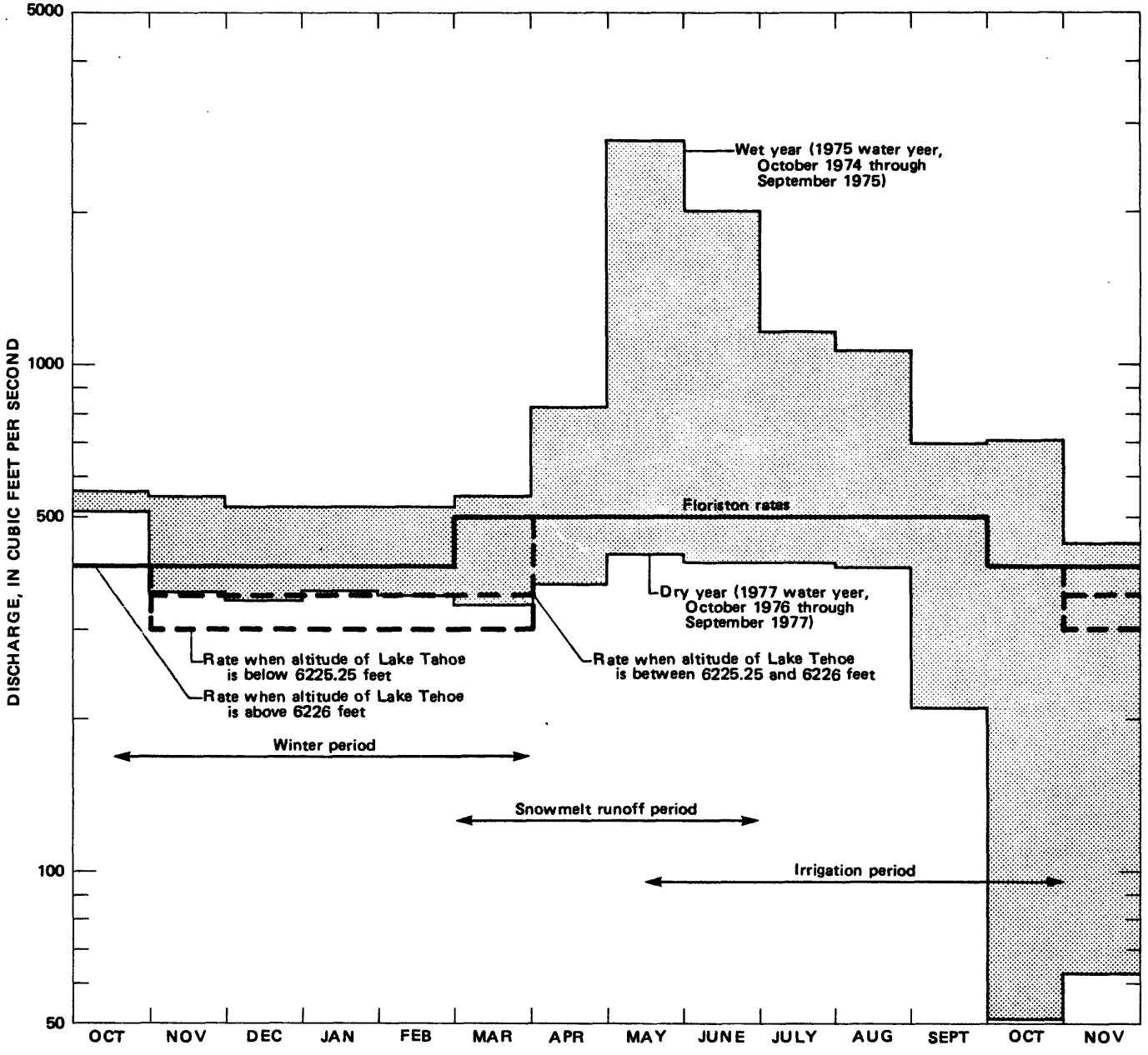
[19]May be increased to 317,280 acre-feet with the use of flashboards on spillways.

The Floriston rates specify the minimum flows for the Tuckee River at Farad, California, according to the season and the stage of Lake Tahoe (Table 4)

Water-surface altitude at Lake Tahoe Dam (feet, NGVD of 1929)		Floriston rates: Flow at Farad Gage (10346000) (ft^3/s)			
		Oct.	Nov.-Feb.	Mar.	Apr.-Sept.
Below	6,225.25	400	300	300	500
Between	6,225.25 and 6,226	400	350	350	500
Above	6,226	400	400	500	500

Although the river is usually controlled within the extremes noted above, the system is not adequate to counteract serious drought or flooding. Floriston rates could not be met for extended drought periods in the 1920's and 1930's, and severe flooding in Reno-Sparks occurred during several years in the 1950's and 1960's (pl. 3). Even with the addition of new control structures after the 1930's, Floriston rates could not be achieved for several periods, the most recent serious shortfall occurring in 1977 (fig. 7). Flooding remains perhaps a somewhat lesser threat than during the 1950's and 1960's because of the addition of Martis Creek and Stampede Reservoirs in the 1970's. However, problems with leakage at Martis Creek Dam have forced limitations on storage there, and the Dam had not been severly tested during flood conditions as of 1980.

In addition to the specified flows, there are several minor constraints on reservoir operation, two of which are noted in table 3. One is a minimum outflow requirement for most reservoirs to maintain downstream fish habitat. The other is an agreement for a minimum outflow from Lake Tahoe subject to the storage of water in Prosser Creek Reservoir (Pyramid Lake Task Force, 1971, p. 92-95). Releases from Lake Tahoe are limited to the least of (a) the quantity that can be released from Lake Tahoe, (b) the quantity that can be stored in Prosser Creek Reservoir, or (c) 50 ft^3/s or 70 ft^3/s (see footnote 7 in table 3). An additional constraint on the system, established by the Corps of Engineers to protect the dams from possible flood effects, prevents early filling of the reservoirs before the flood season has passed.



The mean monthly flows at Truckee River at Farad (10346000) for a wet year and a dry year reflect the variability in the system with respect to Floriston rates. *(FIGURE 7)*

Annual Operations

Reservoir operations are keyed to three periods referred to herein as winter, runoff, and irrigation (fig. 7). These periods overlap to some extent, and during those times the flows are modified significantly to meet the requirements of the succeeding period. To explain these changes, the sequence of events in a wet period (1974-75) and a dry period (1976-77) were chosen as examples. The flows at Truckee River at Farad during these years are shown together with the Floriston rates in figure 7.

As the irrigation period ends in late September or early October with colder weather and shorter days, flood control criteria go into effect. At this time, the Water Master orders releases from reservoirs as necessary to create and maintain the flood storage capacity indicated in table 3. During this time, flows in the Truckee River may exceed Floriston Rates. The Water Master maintains the flood storage capacity from November 1 until the runoff period or until flooding is imminent. Instructions as to the timing of filling reservoirs are provided by the U.S. Army Corps of Engineers in concert with runoff predictions by the U.S. Soil Conservation Service. In September 1974, the Water Master ordered releases from Prosser Creek, Boca, and Stampede Reservoirs. These releases caused Floriston rates to be exceeded during those months by about 200 ft^3/s. In 1976, by contrast, flows did not increase because the reservoirs were already heavily drawn down.

During the winter season the Water Master attempts to maintain Floriston rates with freedom to store or release water according to the priorities in table 3, so long as flood storage space is maintained. How much water is actually stored depends upon reservoir volume and available runoff. In 1975, Prosser Creek, Stampede, and Boca Reservoirs were almost full within flood-storage constraints during the entire winter period, and flows remained above Floriston rates. In 1977, the 350 ft^3/s maintained during the winter was a combination of 300 ft^3/s flow necessary to maintain Floriston rates and water being bypassed for storage in Lahontan Reservoir. Maintenance of the higher flow did not allow the Water Master to store a significant amount of water upstream.

As the weather becomes warmer and heavy snowmelt begins in April and May, the Water Master orders water storage in the reservoirs according to the priorities in table 3. The rate at which flood-storage constraints are relaxed is dependent upon runoff predictions of the Soil Conservation Service. Because of this, the Water Master's ability to hold flow to Floriston rates is less in a wet year than in a dry year. In 1975, limitations on storing water because of runoff predictions prevented the Water Master from limiting flows to Floriston rates during the entire runoff period (fig. 7). In 1977, insufficient runoff and stored water prevented the rates from being met after April 1.

Irrigation begins during the runoff period and reaches a high level of water use by the time that the Water Master must start using stored water to meet Floriston rates. To meet the rates, the Water Master releases stored water according to the priorities in table 3. In 1975, only releases from Lake Tahoe were necessary and flow remained at or above the rates. In 1977, the use of Lake Tahoe, Prosser Creek Reservoir, and Boca Reservoir from June to September enabled the Water Master to maintain only about 400 ft^3/s, and by the end of September all of the reservoirs were empty. Only the releases of privately owned water from Donner and Independence Lakes in August and September maintained enough flow to provide municipal water for the Reno-Sparks area.

Traveltime for Truckee River Flows

Traveltime of flows is a basic hydrologic consideration in water management and in understanding the transport of many water-quality constituents. Traveltime is the time it takes for constituents placed in the river to move downstream from one point to another. Therefore, traveltime is important in estimating, for example, how long it will take for sewage discharge or a spilled contaminant to move from its point of origin to a critical place downstream.

Constituents in water disperse as they move downstream, some lagging along banks and in pools while others near the surface in the center of flow move more rapidly. Thus, the constituents may be spread out over a considerable reach of river by the time they have moved significantly downstream. During low flows, constituents tend to spread out over great distances and remain in a given reach of the river for long periods. During high flows, constituents tend to spread out more slowly and pass through a given reach of the river more quickly.

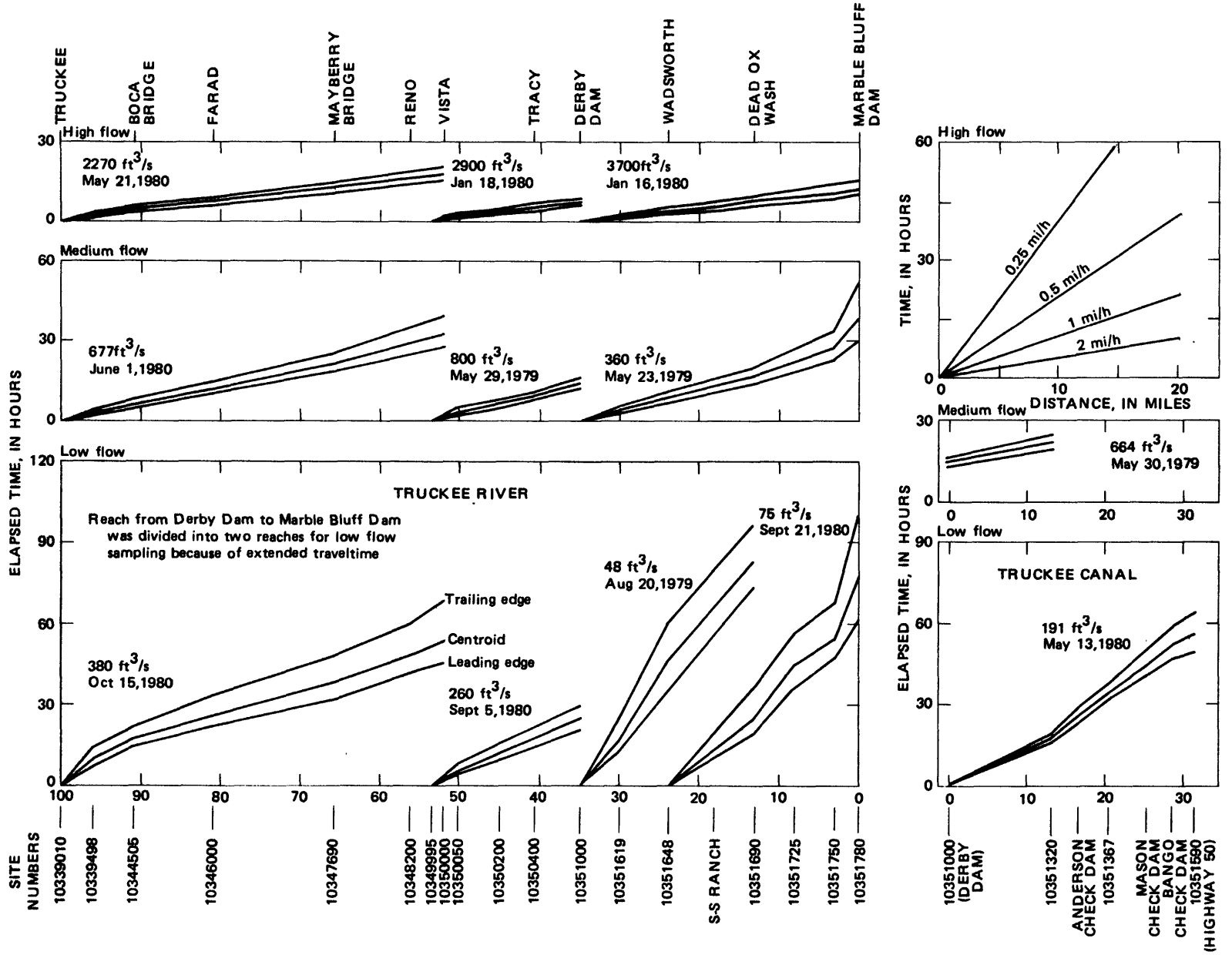
Measurement of traveltime thus includes measurement of dispersion and dilution as well as velocity of flow. Information on traveltimes would be useful, for example, in timing the discharge from a sewage treatment plant to coincide with high flows released from a reservoir upstream, or to avoid conflict with planned diversions downstream. Consideration of traveltime is fundamental to modeling the flow and water-quality characteristics of a river, and to managing the river to meet desired goals for water quality and quantity at specific points along the river.

Traveltime, dilution, and dispersion are measured using a fluorescent dye that is injected into the river and traced by sampling and monitoring at several downstream sites (Hubbard and others, 1981). The dye mixes completely with the flow and moves in the same manner as the flow. Thus, it is characteristic of other soluble materials that might enter the river. At each downstream site, the measurements of the traces yield the time of arrival of the dye-water solution (leading edge), the time of arrival of the center of mass of the solution (centroid), and the time at which the solution was no longer detectable (trailing edge).

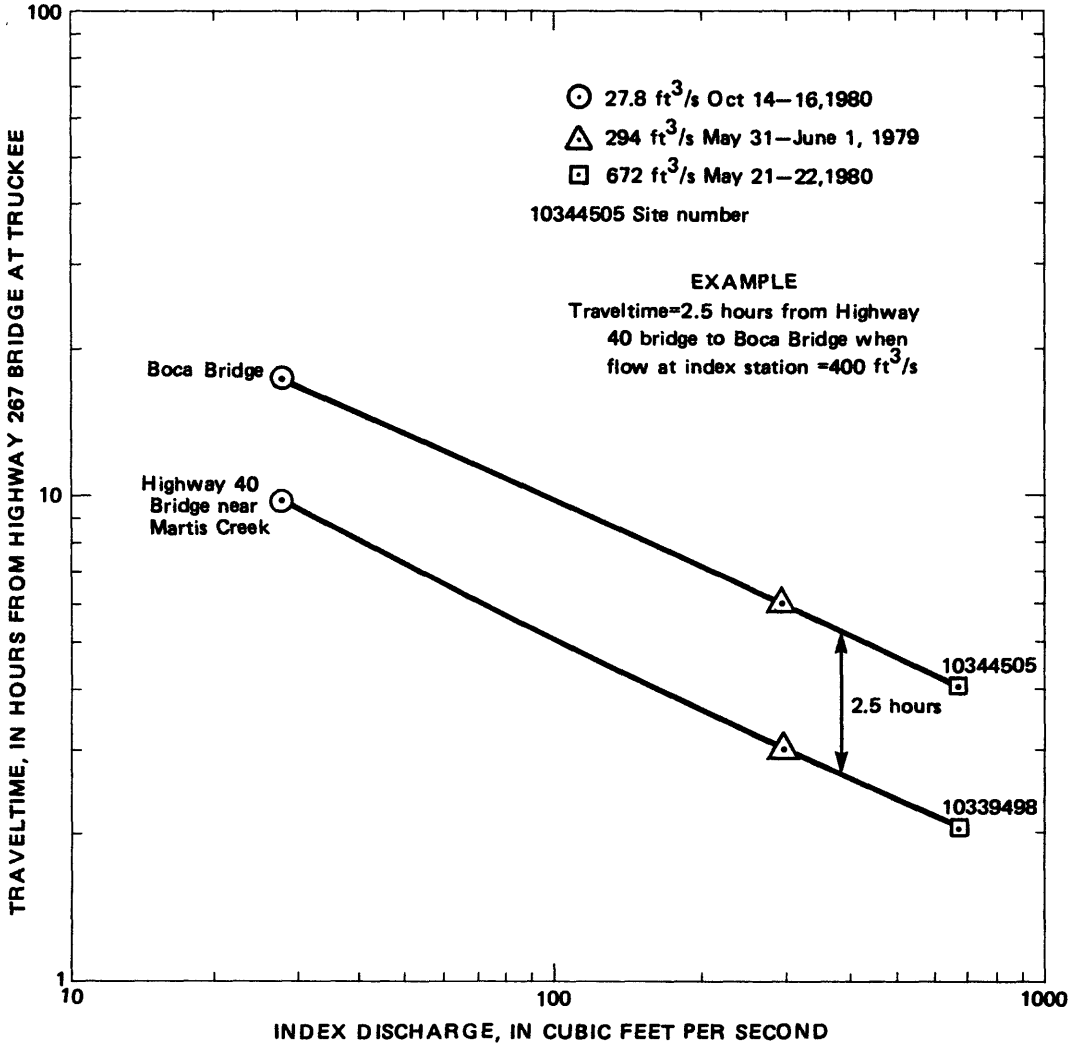
The following discussion summarizes the results of traveltime studies done in 1979 and 1980 on the Truckee River for four reaches and a wide range of flows. The reaches were: Truckee, Calif., to Vista, Nev.; Vista to Derby Dam; Derby Dam to Marble Bluff Dam; and Derby Dam to Lahontan Reservoir via the Truckee Canal (pl. 2C). The flows ranged from about 35 ft^3/s during the summer low-flow period to about 3,700 ft^3/s during the spring snowmelt runoff period. Sampling sites along the reaches are indicated by number and abbreviated name in figures 8-12. Detailed information on each site is contained in Supplemental Data B.

Figure 8 shows the summary results for dye injections at low, medium, and high flows for the four reaches. The graphs illustrate that traveltimes are shorter in steeper parts of the river than in the downstream parts where slopes are flatter. Also, traveltimes are shorter during higher flows than during lower flows in all parts of the river. The extent of dye dispersion can be seen in the difference in time of arrival of the leading and trailing edges at a given site. For example, for a flow of 380 ft^3/s on October 15, 1980, for the reach from Truckee, Calif., to Vista, Nev., the dye injected at Truckee took about 46 hours to reach Vista. The centroid of the dye concentration arrived about 7 hours later, and the trailing edge passed about 22 hours after the leading edge arrived. Therefore, the centroid moved at about 1 mi/h, and the dye occupied about 22 miles of the river as the centroid was passing Vista.

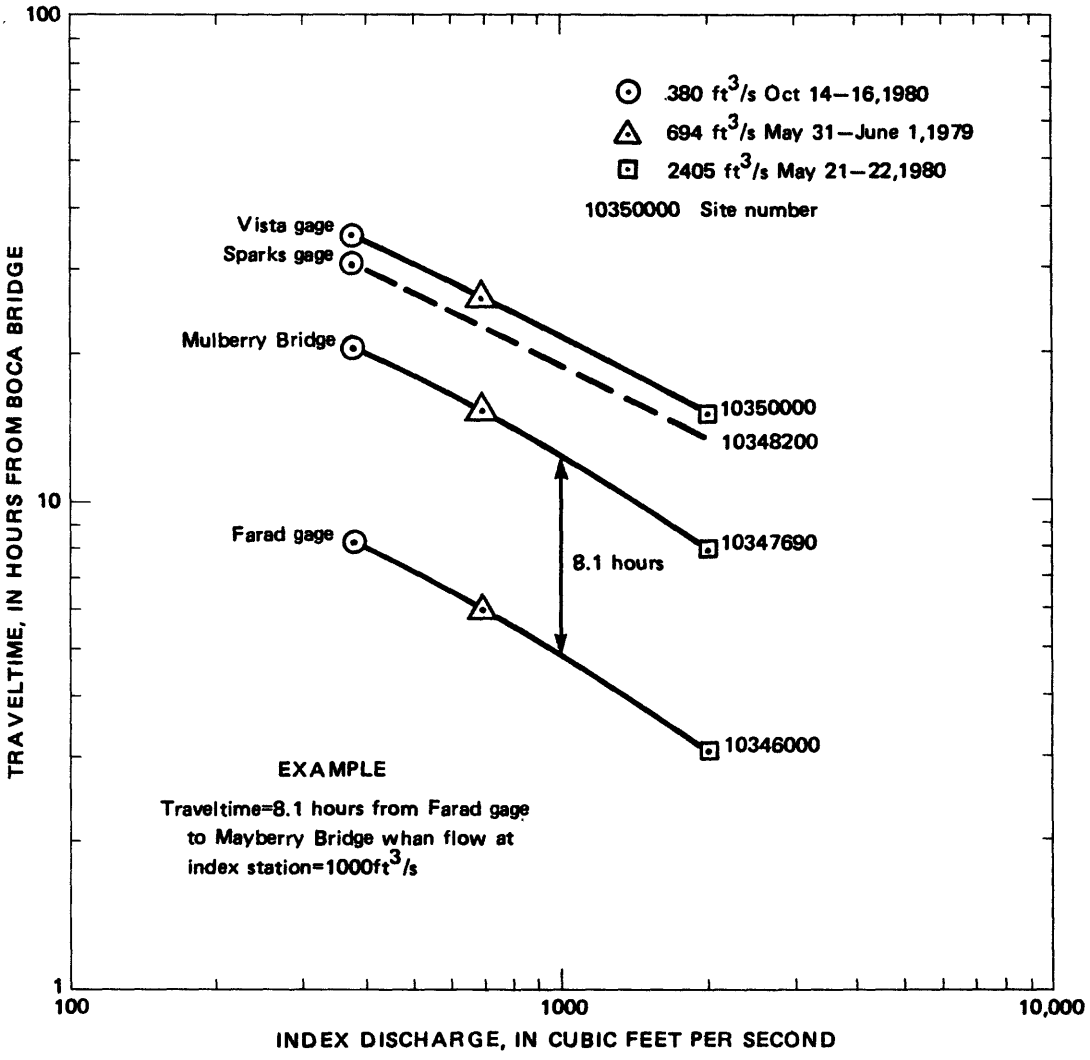
Figures 9-12 suggest traveltimes of flow centroids over a range of flows between those observed during field measurements. These graphs can be useful in estimating traveltimes between sites in a reach when flow at the index gage is known. In the example shown in figure 9, the traveltime between the Highway 40 bridge near Martis Creek (10339498) and Boca bridge (10344505) is about 2.5 hours when the flow at Truckee is 400 ft^3/s. If one were tracing the spill of a contaminant, conservative estimates of the extent of dispersion of the contaminant could be made using figure 8. Because the traveltimes and extent of dispersion depend upon flow characteristics along the entire reach in question, care must be used in applying the curves of figures 9-12. For example, diversions during low-flow periods or changes in channel geometry might significantly alter the quantity of flow in a given reach, and traveltime estimates might not be valid for that reach. The complete results of the traveltime measurements including basic data are reported by LaCamera and others (U.S. Geological Survey, written commun., 1980). Detailed explanations of the characteristics of traveltime, dilution, and dispersion are given by Hubbard and others (1981).



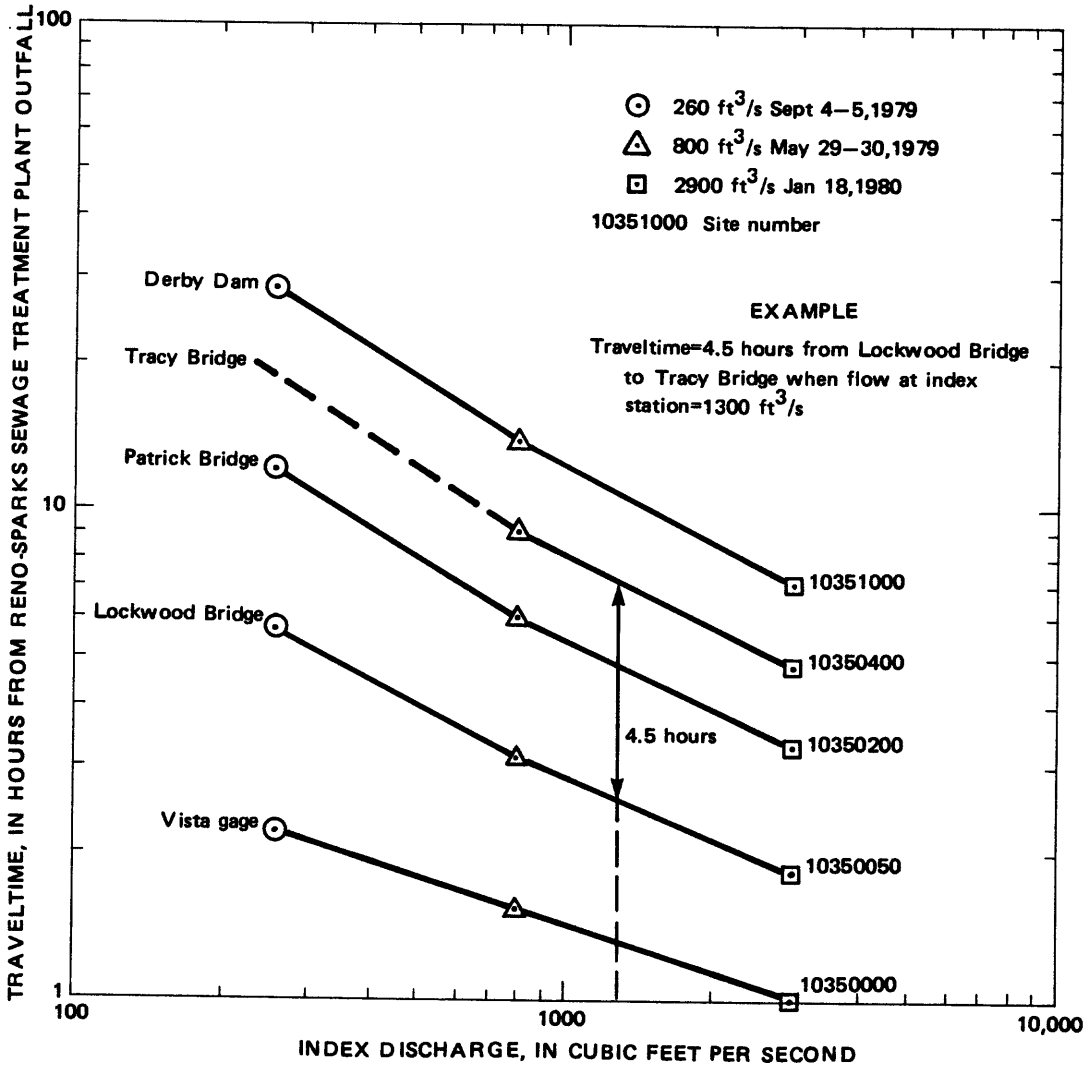
The traveltime and dispersion characteristics of the Truckee River and Truckee Canal differ greatly depending upon flow and location. *(FIGURE 8)*



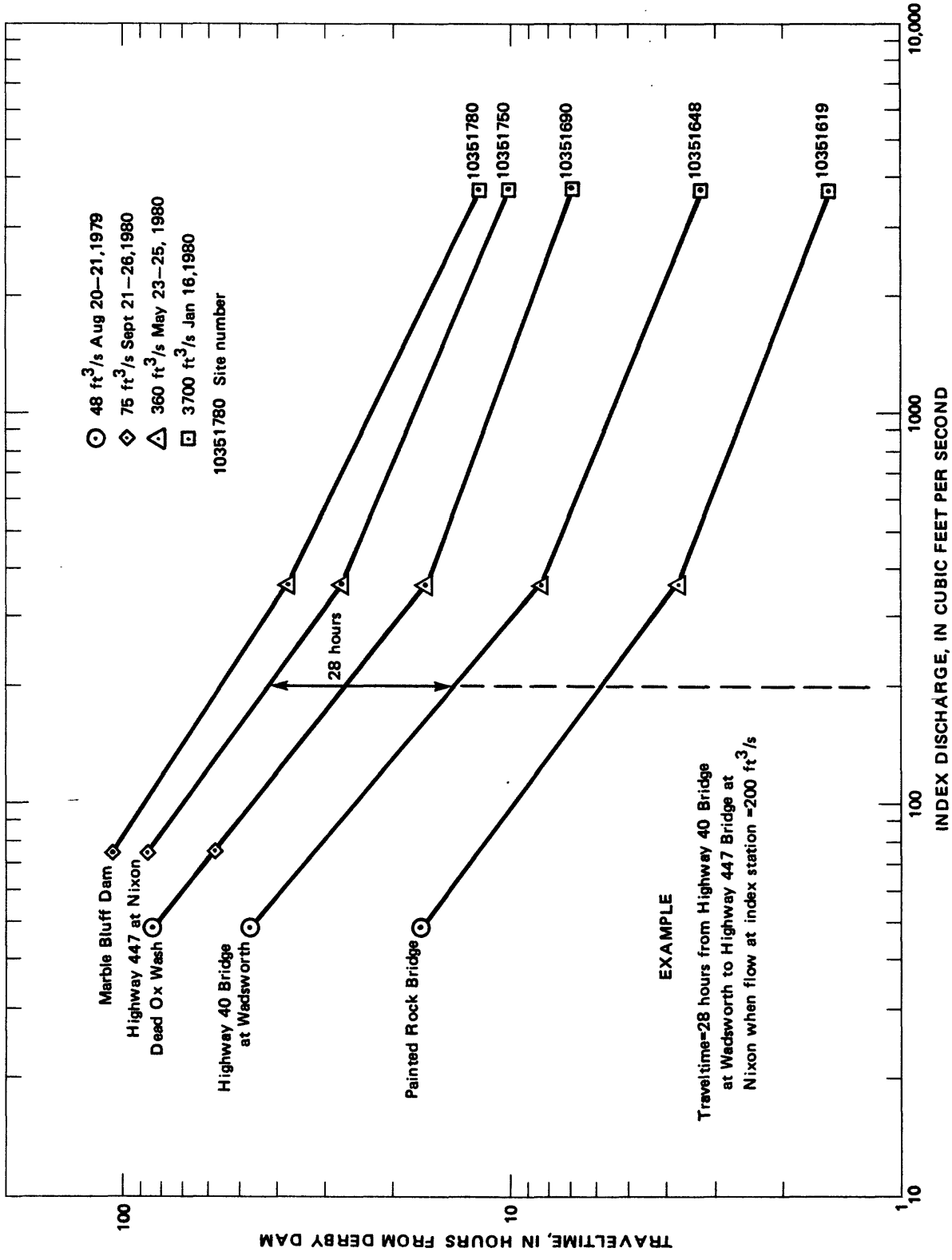
Traveltime for the Truckee River between the Highway 267 Bridge at Truckee and the Boca Bridge may be estimated from these curves using discharge at the index station Truckee River near Truckee (10338000). *(FIGURE 9)*



Traveltime for the Truckee River between the Boca Bridge and the Vista gage may be estimated from these curves using discharge at the index station Truckee River at Farad (10346000). ***(FIGURE 10)***



Traveltime for the Truckee River between the Vista gage and Derby Dam may be estimated from these curves using discharge at the index station Truckee River at Vista (10350000). ***(FIGURE 11)***



Traveltime for the Truckee River between Derby Dam and Marble Bluff Dam may be estimated from these curves using discharge at the index station Truckee River below Derby Dam (10351600). *(FIGURE 12)*

Water-Quality Characteristics

Historical Data

Water-quality data have been collected in the Truckee and Carson River basins by several agencies and organizations whose activities are summarized in Supplemental Data A and B. Long-term monitoring efforts have been conducted principally by three agencies: The Nevada Division of Environmental Protection (NDEP), the Desert Research Institute of the University of Nevada, Reno (DRI), and the U.S. Geological Survey (USGS). The following discussion of water-quality characteristics uses historical data from each of these agencies to provide an overview of water quality in the two basins.

Characteristics of Interest and Period of Record

Stream temperature, dissolved solids, and nitrate-nitrogen (N) are used to illustrate the basic water-quality characteristics of the two basins. Knowledge of the water-temperature regimen of a river is of fundamental concern to preservation and maintenance of beneficial aquatic habitat, particularly with respect to sport fisheries. Sections of both the Truckee and Carson Rivers are managed by State agencies of California and Nevada to provide cold-water sport fisheries. In addition, on the Truckee River the U.S. Fish and Wildlife Service has mandates to reestablish endangered and threatened fish species, and the Pyramid Lake Indian Tribe is concerned with fishery management for Pyramid Lake as well as for the downstream part of the river within the Reservation. Concentrations of dissolved solids provide an indication of the total mineral content of waters and are of interest to those managing industrial and municipal water supplies as well as agencies managing in-stream beneficial uses such as fisheries. Concentrations of nutrients such as nitrogen and phosphorus are of concern to water managers because of their potential for eutrophication or excessive enrichment of the aquatic habitat. In addition, nitrogen concentrations are of concern with respect to potential toxicity of ammonia, nitrite, and nitrate to fish and their eggs. Limited historical data on ammonia and nitrite have led to nitrate being chosen as an index of nitrogen distribution in the two basins.

Water years 1970 to 1979 were chosen to provide a consistent 10-year period of record for describing water-quality characteristics in this report. Mean annual streamflows for this period are fairly representative of the long-term mean streamflows. The period contained both a wet or high-flow year (1975) and a dry or low-flow year (1977). Thus, flow-related water-quality extremes encountered in this 10-year record are likely to be representative of the effects of streamflow on water quality in similar periods of historical record prior to 1970.

Stream Temperatures

Periodic stream temperature data derived from monthly water-quality sampling by DRI, NDEP, and USGS as well as monthly temperature measurements at USGS gaging stations are summarized in table 5 for the 1970-79 period. These data are based on instantaneous measurements made randomly during the daylight hours. During warmer months, particularly where affected by warm irrigation return flows, stream temperatures undergo a diel fluctuation such that instantaneous measurements in the daytime are often biased toward values higher than the daily mean temperatures.

Seasonal variations in stream temperatures have been demonstrated to show a persistent seasonal pattern from year to year. This pattern is cyclic and has been shown by Collings (1969) to approximate a sine function with one-year period of the form:

$$T(t)=M + A \ [\sin (b(t+c))]$$

where

$T(t)$ = stream temperature on day t (from October 1),
M = mean harmonic temperature, in degrees Celsius,
A = amplitude of the harmonic function, in degrees Celsius,
b = 360/365=0.986 degrees per day, and
c = phase lag of the annual cycle, in days.

A least-squares regression procedure to fit this function (Steele, 1974) was applied to periodic temperature data available for the period 1970-79, and its results are included in tables 5 and 6. This method of analysis is useful in that it provides a model that can be used to predict mean daily stream temperatures for any given day of the year. The accuracy of the harmonic estimates may be evaluated by the RSQD and standard error information in table 6. The RSQD statistic is the square of the correlation coefficient, expressed as a percentage, and indicates the percentage of temperature variability explained by the harmonic function. The standard error indicates the accuracy of temperature prediction; about 67 percent of the temperatures will fall within plus or minus one standard error of the predicted curve, and 95 percent will fall within two standard errors. Note in tables 5 and 6 that the predicted mean annual temperature is usually in excellent agreement with the mean for 10 years of spot field measurements. Analyses of the frequency distribution of instantaneous temperature measurements indicates that the maximum annual temperature predicted by the harmonic analysis represents a value likely to be exceeded only from 15 to 20 percent of the time.

Seasonal trends in stream temperatures are illustrated by the harmonic curves for selected sites in the Truckee and Carson basins (fig. 13). These curves generally show increases in both peak temperatures and in the total range of temperatures in a downstream direction in both river basins. Exceptions are in the cooling of the Truckee River between Lake Tahoe and Vista and in the Carson River immediately below Lahontan Reservoir. Water temperatures in both basins tend to peak in early to mid-August in the upper reaches and in July in lower reaches.

Periodic stream-tempersture data for 1970-79 water years were analyzed to produce predictive information for the Truckee River basin (Table 5)

Site number: Identifying site number used by the respective agency collecting data.

River miles: Truckee River, miles upstream from Marble Bluff Dam; Carson River, miles upstream from Lahontan Dam.

Agency: Agency from which data were obtained: GS, U.S. Geological Survey; DRI, Desert Research Institute, University of Nevada, Reno.

Results of harmonic analysis: Periodic data fitted by a least-squares regression to annual time series of the form: $T = M + A [\sin (b(t+c))]$ where T is the stream temperature, in degrees Celsius, on day t, as t varies from 1 to 366 (October 1 ss dsy 1); M is the mean annual stream temperature, in degrees Celsius; A is the amplitude of the snnual stresm-temperature curve, in degrees Celsius; b is a constant equal to 360/365, or 0.986 degrees per day; c is the phase lag of the annual cycle, in days; and RSQD is the percentage of variations explsined by the harmonic function (see text p. 45.)

Site No.	Site name	River miles	Altitude (feet above NGVD of 1929)	Mean stream-flow (ft^3/s)	Number of observations	Observed temperatures			Results of harmonic analysis					Predicted temperatures			Agency
						max. (°C)	mean (°C)	min. (°C)	M (°C)	A (°C)	c (days)	RSQD	Standard error	max. (°C)	mean (°C)	min. (°C)	
10337500	Truckee River at Tahoe City.	116.20	6,220	258	110	20.0	9.7	0.5	9.62	6.41	146	84.6	1.81	16.0	9.6	3.2	GS
T26	Truckee River below Tahoe Dam.	116.20	6,220	--	111	22.0	9.5	.0	9.44	6.63	141	84.3	1.82	16.1	9.4	2.8	DRI
T27	Truckee River above Squaw Creek.	110.16	6,060	--	104	20.4	9.2	.0	9.27	6.86	140	84.3	1.90	16.1	9.3	2.4	DRI
T32	Truckee River sbove Donner Creek.	102.50	5,835	--	114	20.0	9.1	.0	8.91	7.00	145	85.2	1.90	15.9	8.9	1.9	DRI
T33	Donner Creek.	102.12	5,820	--	109	22.5	9.7	.0	9.28	7.72	143	80.4	2.39	17.0	9.3	1.6	DRI
T34	Truckee River above Martis Creek.	96.93	5,650	--	107	22.0	9.0	.0	9.26	7.35	146	84.5	2.05	16.6	9.3	1.9	DRI
T35	Prosser Creek above Prosser Creek Reser-voir.	93.72	5,760	--	95	22.0	7.8	.0	6.73	7.04	148	79.0	2.17	13.8	6.7	.01	DRI
T36	Prosser Creek below Prosser Creek Reser-voir.	93.72	5,580	--	102	21.0	8.5	.0	8.17	6.97	149	78.6	2.23	15.1	8.2	1.2	DRI
T38	Little Truckee River above Stampede Reservoir.	91.69	6,160	--	92	20.0	7.4	.0	6.33	7.00	145	81.6	2.01	13.3	6.3	--	DRI
T106	Little Truckee River above Bocs Reser-voir.	91.60	5,640	--	701	22.0	7.0	.0	6.59	4.15	149	54.1	1.95	10.7	6.6	2.4	DRI
T39	Little Turckee River below Boca Reser-voir.	91.60	5,550	--	117	19.0	7.9	.0	8.57	5.08	132	32.01	2.95	13.6	8.6	3.5	DRI

Periodic stream-temperature data for 1970-79 water years were analyzed to produce predictive information for the Truckee River basin (Table 5)--Continued

Site No.	Site name	River miles	Altitude (feet above NGVD of 1929)	Mean streamflow (ft^3/s)	Number of observations	Observed temperatures			Results of harmonic analysis					Predicted temperatures			Agency
						max. (°C)	mean (°C)	min. (°C)	M (°C)	A (°C)	c (days)	RSQD	Standard error	max. (°C)	mean (°C)	min. (°C)	
T42	Truckee River at Farad.	82.42	5,165	--	100	22.5	8.5	0.0	7.81	6.53	149	87.0	1.65	14.3	7.8	1.3	DRI
10346000	Truckee River at Farad.	81.89	5,145	744	119	20.0	8.5	.0	8.39	6.84	152	85.1	1.85	15.2	8.4	1.6	GS
T57	Truckee River below Verdi.	71.09	4,775	--	107	18.3	8.5	.0	8.20	6.56	149	86.4	1.67	14.8	8.2	1.6	DRI
T44	Truckee River at Idlewild Park.	61.74	4,505	--	110	19.0	9.2	.0	8.77	7.04	153	89.6	1.58	15.8	8.8	1.7	DRI
10348000	Truckee River at Reno.	59.07	4,440	613	97	21.0	9.4	.0	9.33	6.93	153	85.3	1.92	16.3	9.3	2.4	GS
T46	Truckee River at Boynton Lane.	56.12	4,385	--	87	20.5	9.9	.0	9.55	7.23	153	80.1	2.29	16.8	9.6	2.3	DRI
T64	North Truckee Drain at Kleppe Way.	53.67	4,385	--	117	22.5	11.6	.0	11.54	6.63	165	79.25	2.18	18.2	11.5	4.9	DRI
T47	Steamboat Creek at Kimlick Lane.	53.53	4,380	--	114	25.0	10.5	.0	10.4	8.30	161	85.8	2.23	18.7	10.4	2.1	DRI
10350000	Truckee River at Vista.	52.23	4,370	731	103	23.5	10.8	.0	10.70	7.99	145	80.7	2.50	18.7	10.7	2.7	GS
T59	Truckee River at Vista.	51.67	4,365	--	111	22.0	10.4	.0	10.31	8.04	157	87.5	2.03	18.4	10.3	2.3	DRI
10351300	Truckee Canal near Wadsworth.	22.94	4,240	--	110	25.5	13.4	.0	11.70	8.37	157	81.4	2.42	20.1	11.7	3.3	GS
10351400	Truckee Canal near Hazen.	6.23	4,180	--	123	28.0	13.1	.0	12.39	8.93	161	82.0	2.61	21.3	12.4	3.5	GS
10351600	Truckee River below Derby Dam.	34.52	4,185	--	100	26.0	12.0	.0	11.57	7.59	163	72.3	2.81	19.2	11.6	4.0	GS
T80	Truckee River below Derby Dam.	34.52	4,185	424	111	27.0	12.0	.0	11.94	9.25	157	86.0	2.47	21.2	11.9	2.7	DRI
10351650	Truckee River at Wadsworth.	23.11	4,045	--	125	29.0	12.1	.0	11.92	8.31	162	80.7	2.71	20.2	11.9	3.6	GS
T54	Truckee River below Wadsworth.	22.53	4,040	--	113	28.0	12.3	.0	12.22	9.32	161	89.0	2.23	21.5	12.2	2.9	DRI
10351700	Truckee River near Nixon.	9.50	3,935	458	113	25.0	11.7	.0	11.37	8.34	158	82.9	2.50	19.7	11.4	3.0	GS
T50	Truckee River at Nixon.	3.22	3,875	--	113	29.5	13.1	.0	13.12	9.48	161	76.0	3.35	22.6	13.1	9.5	DRI

Periodic stream-temperature data for 1970-79 water years were analyzed to produce predictive information for the Carson River basin (Table 6)

Site number: Identifying site number used by the respective agency collecting data.

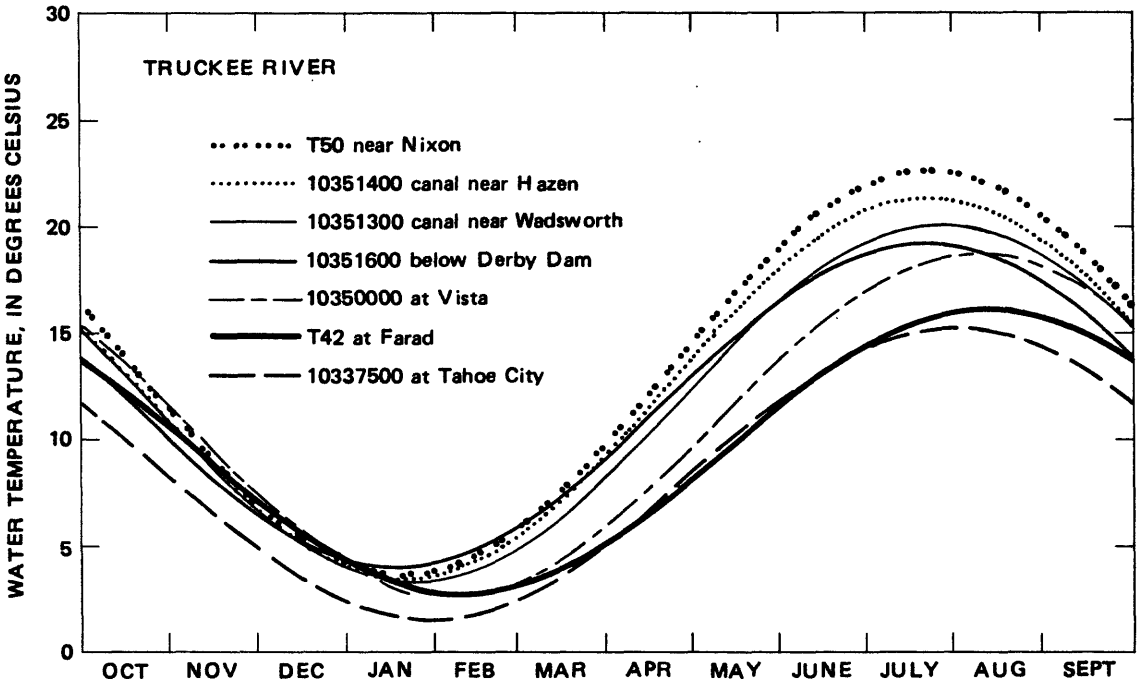
River miles: Truckee River, miles upstream from Marble Bluff Dam; Carson River, miles upstream from Lahontan Dam.

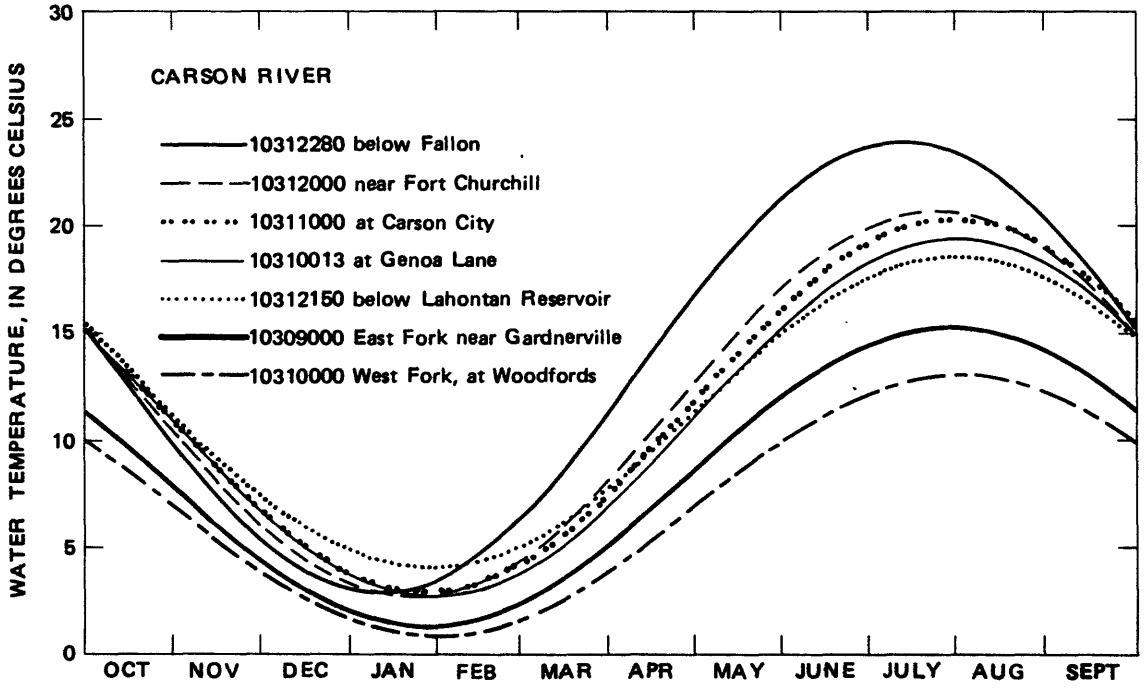
Agency: Agency from which data were obtained: GS, U.S. Geological Survey; DEP, Nevada Division of Enviromental Protection.

Results of harmonic analysis: Periodic data fitted by a least-squares regression to annual time series of the form: $T = M + A [\sin (b(t+c))]$ where T is the stream temperature, in degrees Celsius, on day t, as t varies from 1 to 366 (October 1 as day 1); M is the mean annual stream temperature, in degrees Celsius; A is the amplitude of the annual stream-temperature curve, in degrees Celsius; b is a constant equal to 360/365, or 0.986 degrees per day; c is the phase lag of the annual cycle, in days; and RSQD is the percentage of variations explained by the harmonic function (see text p. 45.)

Site No.	Site name	River miles	Altitude (feet above NGVD of 1929)	Mean stream-flow (ft^3/s)	Number of observations	Observed temperatures			Results of harmonic analysis					Predicted temperatures			Agency
						max. (°C)	mean (°C)	min. (°C)	M (°C)	A (°C)	c (days)	RSQD	Standard error	max. (°C)	mean (°C)	min. (°C)	
10308200	East Fork Carson River below Markleville.	114.7	5,395	318	68	20.5	7.3	0.0	7.21	6.34	150	79.5	1.98	13.6	7.2	0.8	GS
10309000	East Fork Carson River near Gardnerville.	99.90	4,985	332	81	25.5	8.3	.0	8.31	6.98	156	71.0	2.63	15.3	8.3	1.3	GS
310011	East Fork Carson River at (near) Highway 395.	96.31	4,900	332	103	24.5	9.4	.0	9.56	7.58	152	72.5	2.81	17.3	9.6	2.0	DEP
10310000	West Fork Carson River at Woodfords.	105.61	5,080	93	118	18.0	6.9	.0	7.00	6.08	152	79.3	1.97	13.1	7.0	.9	GS
310008	West Fork Carson River near Highway 88.	100.80	5,080	93	104	22.0	8.3	.0	9.03	6.81	148	70.9	2.59	15.8	9.0	2.21	DEP
310013	Carson River at Genoa Lane.	83.90	4,660	--	104	30.0	11.0	.5	11.11	8.36	153	72.0	3.16	19.5	11.1	2.8	DEP
10311000	Carson River near Carson City.	70.40	4,620	355	108	29.0	11.6	.0	11.70	8.73	155	72.7	3.21	20.4	11.7	3.0	GS
310015	Carson River near New Empire.	63.38	4,595	355	93	27.5	10.7	.0	11.23	8.63	161	80.8	2.71	19.9	11.2	2.6	DEP
10312000	Carson River near Fort Churchill.	30.82	4,214	325	116	27.5	11.6	.0	11.78	9.08	160	85.6	2.40	20.9	11.8	2.7	GS
10312150	Carson River below Lahontan Reservoir.	-1.16	4,040	478	134	22.0	10.9	1.0	11.39	7.26	154	83.4	2.07	18.6	11.4	4.6	GS
10312210	Stillwater Diversion Canal near Fallon[1]	--	3,920	--	87	28.0	--	--	12.29	9.72	168	81.5	3.00	22.0	12.3	2.6	GS
10312280	Carson River below Fallon.	-33.76	3,880	18.6	97	31.0	13.3	.0	13.43	10.58	171	75.4	3.52	24.0	13.4	2.8	GS

[1]Data available for summer months only.



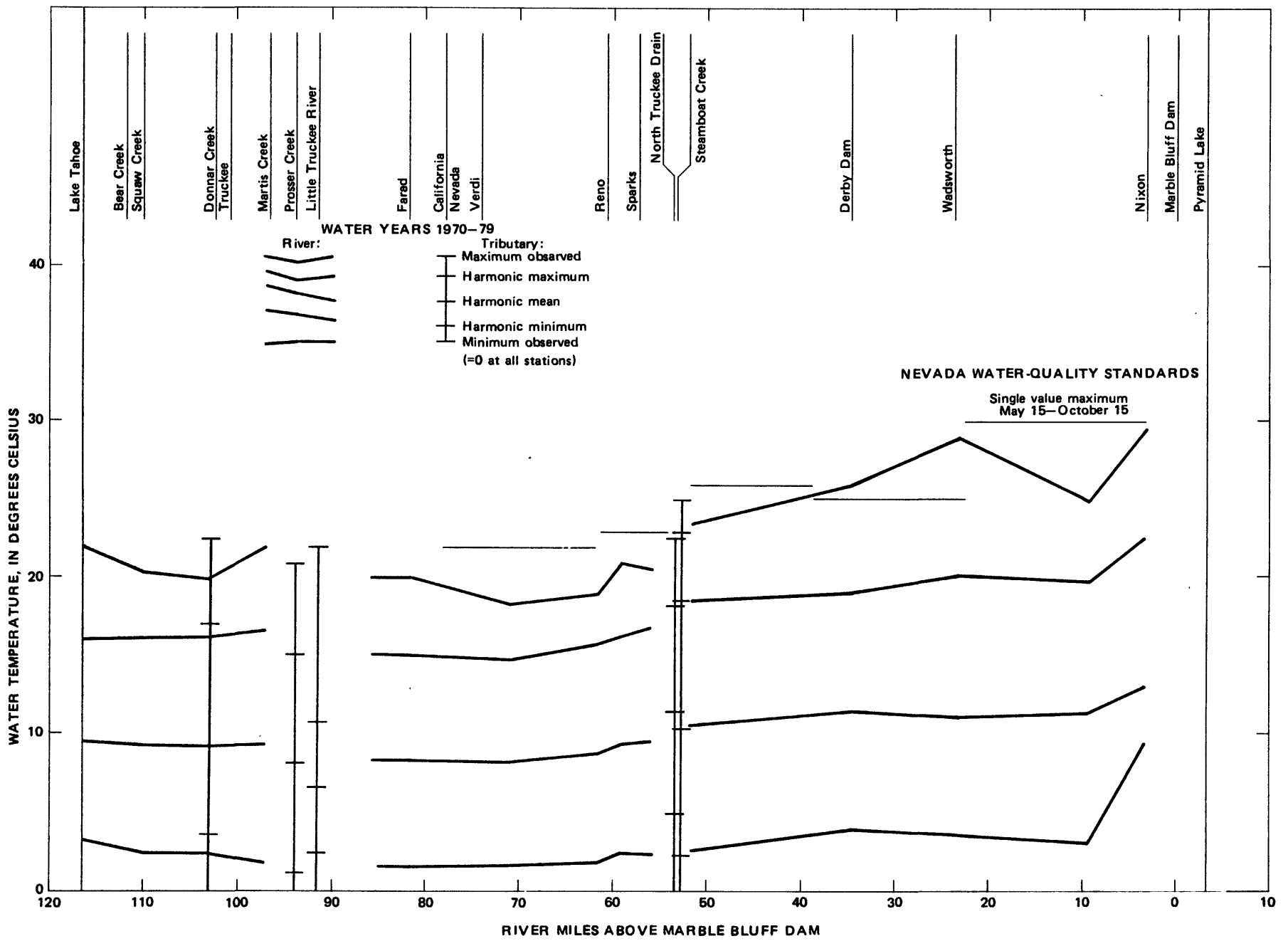


Harmonic analysis of data for 1970–79 water years shows that water temperatures peak in July and August in the Truckee and Carson Rivers (see tables 5 and 6 for data). *(FIGURE 13)*

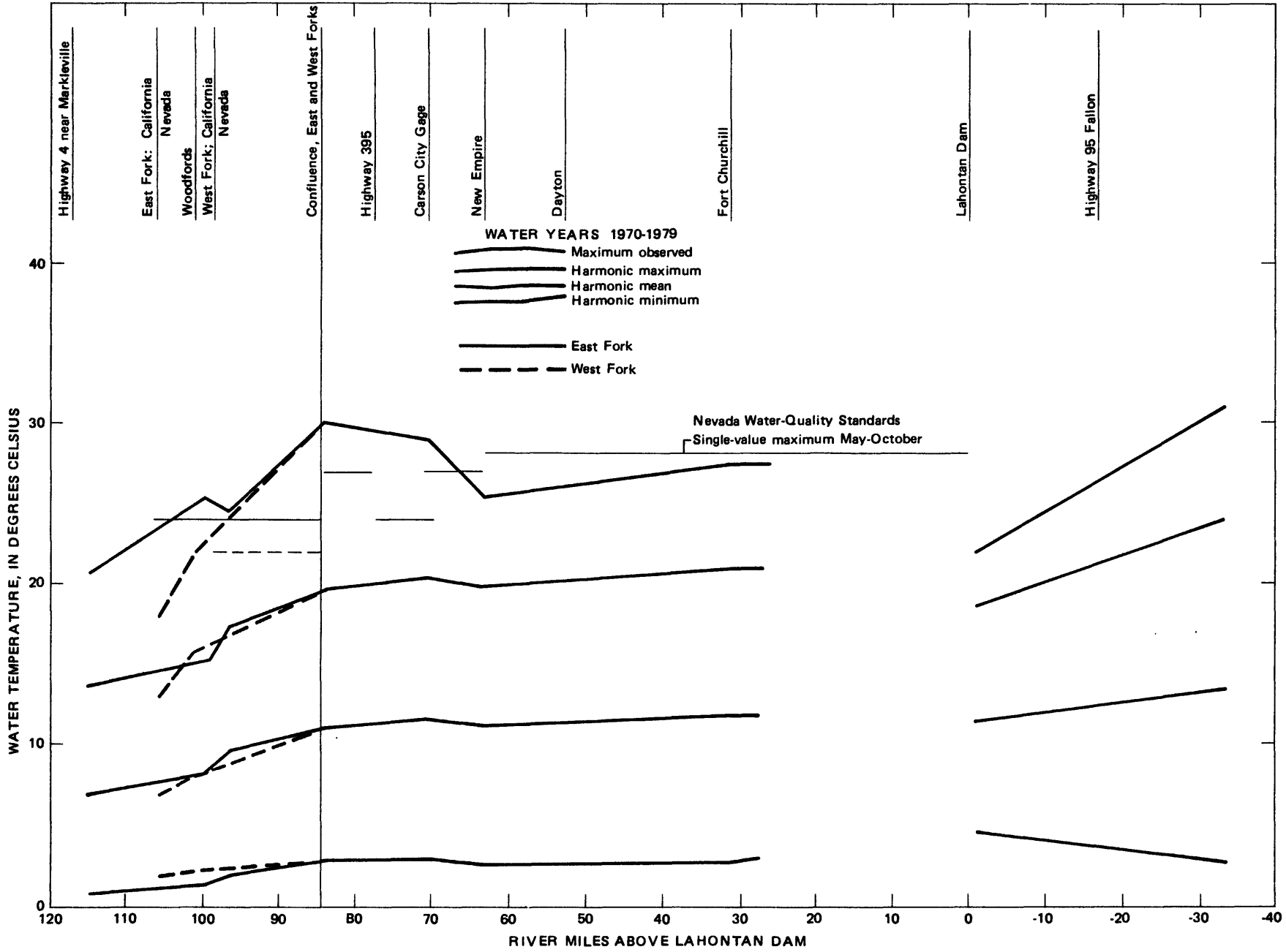
Profiles of water-temperature characteristics (fig. 14) show that temperatures in the Truckee River decrease as releases from Lake Tahoe travel through the mountain canyons of the Upper Truckee River subunit. The mainstem of the river is slightly cooled by inflows from Prosser Creek and the Little Truckee River and warmed by inflows from Donner and Martis Creeks. The temperature of the river begins to rise in the middle Truckee River subunit below Verdi because of agricultural returns and the effects of the Reno-Sparks urban area. The mean temperature increases by 1.4°C in the 15-mile reach from below Verdi to Boynton Lane. Inputs from North Truckee Drain, Steamboat Creek, and the Reno-Sparks sewage effluent create a rise in the mean temperature of about 1° between Boynton Lane and Vista. Irrigation returns, effluents from gravel pits, and discharge of cooling water from the Tracy powerplant contribute to another rise of slightly more than a degree in about 18 miles from Vista to Derby Dam. The mean temperature rises slightly from the effects of reduced flows and irrigation returns between Derby Dam and Wadsworth. Measurements at the gaging station in the canyon near Nixon indicate a drop of about 0.5°C compared to Wadsworth, probably as a result of ground-water inflow and shading in the deeply incised canyon. An increase in the mean temperature of over 1.5°C occurs because of low flows, irrigation returns, and lack of shading in the approximately 5 miles between the mouth of the canyon below the Nixon gage and the town of Nixon.

The temperature profiles for the Carson River (fig. 15) show that mean annual temperatures and maximums increase as water in the East and West Forks leaves the tributary canyons and enters the irrigated lands of the Carson Valley. Maximum temperatures occur in the reach from Genoa to the Carson City gage, followed by some cooling in the canyon between the Carson City and New Empire gages. Temperatures increase again in the reach from New Empire to Fort Churchill where flows are greatly diminished by repeated diversions along the river course. The dampening effect on temperatures by releases from Lahontan Reservoir can be seen in the statistics and curve for temperatures at the gage 1.1 miles below the dam. The mean annual temperature is lowered by 0.4°C, the harmonic maximum by 2.3° and the observed maximum temperature for the 10 years by 5.5° as compared to temperatures at the Fort Churchill gage upstream from the reservoir. This effect on temperature extremes is particularly noticeable in the seasonal harmonic curves in figure 16. Stream temperatures rise again in the river below the intensive irrigation in the Fallon area in response to greatly diminished flows and returns of warm irrigation water.

Current (1981) Nevada water-quality standards for maximum temperatures during May to October are shown on the temperature profiles. These standards are well above the likely seasonal maximum temperatures as reflected by the harmonic analyses for the Truckee and Carson Rivers. However, for the 1970-79 period, maximum observed temperatures were higher than the standard maximums at Lockwood and Wadsworth on the Truckee River and at many sites on the Carson River.



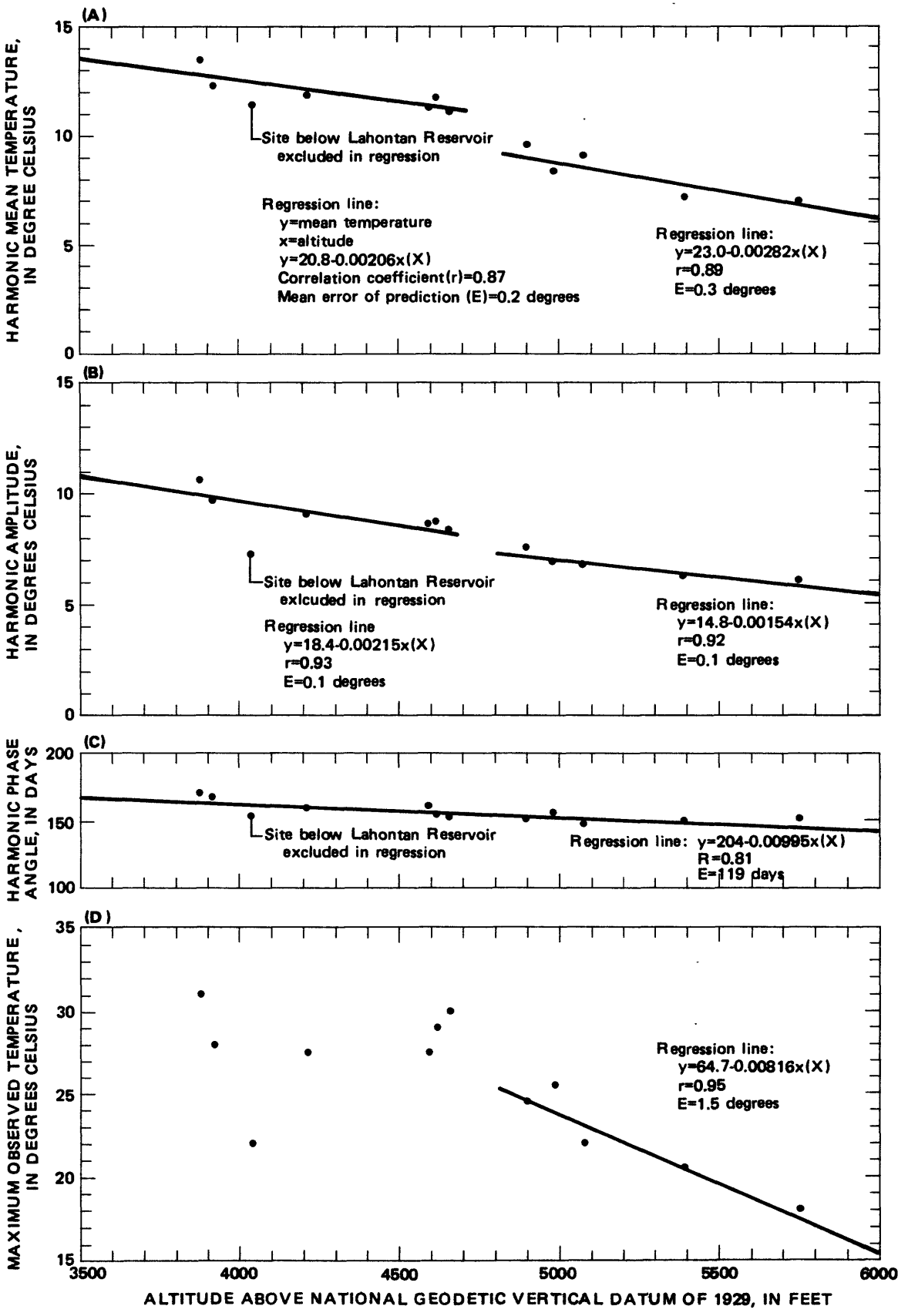
Temperature profiles for the Truckee River show that the harmonic maximum temperatures are within the limits of the Nevada water-quality standards. *(FIGURE 14)*



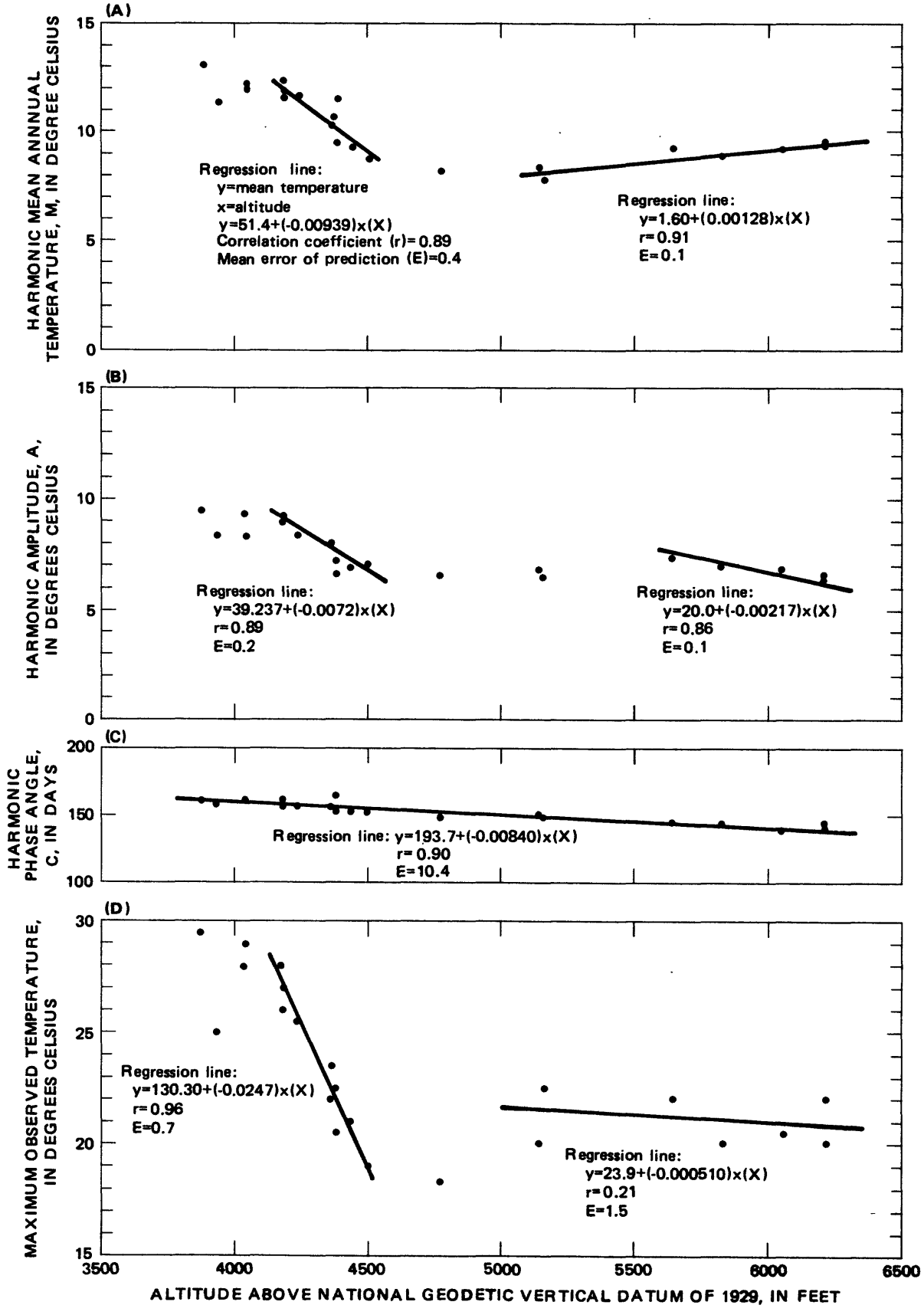
Temperature profiles for the Carson River show that the harmonic maximum temperatures are within the limits of the Nevada water-quality standards. *(FIGURE 15)*

Correlations between water-temperature characteristics and selected basin characteristics show regional trends in the relations between these characteristics and altitudes for the Carson (fig. 16) and Truckee (fig. 17) Rivers. A comparison of these relations illustrates how differing hydrologic regimens and land-use patterns influence water temperatures in the two basins. In the Carson River basin for example, for sites above 4,800 feet in altitude on the unregulated tributary reaches in the East and West Fork subunits, temperature characteristics show an inverse correlation with site altitude (fig. 16A, B, and D). Sites below 4,800 feet (Carson Valley and downstream subunits) are affected by decreased flows because of agricultural diversions and are influenced by irrigation returns and sewage effluent. The harmonic mean and amplitude for sites in these lower reaches show a different relationship for these sites than for sites in the unregulated tributaries, and the maximum observed temperatures are very poorly related to altitude. The harmonic phase lag, a measure of the date of occurrence of seasonal maximums and minimums, shows a good correlation with altitude for all sites on the Carson River (fig. 16C).

In the Truckee River basin, the mean annual temperature (fig. 17A) correlates well with altitude for sites in the Upper Truckee River subunit (altitudes above 5,100 feet) and for sites from Idlewild to below Derby Dam and for the Truckee Canal (altitudes from 4,200 to 4,500 feet). For the upper reach, the mean annual temperature decreases with decreasing altitude as the annual heat load in water from Lake Tahoe is dissipated with river flows down through the canyon of the Upper Truckee River. By the time the water reaches the Idlewild site, the annual heat budget begins being influenced by net gains from solar radiation, atmospheric heating, and the effects of urban and agricultural returns, so that the mean annual temperature increases with decreasing altitude for river sites down to Derby Dam and through the Truckee Canal. The mean annual temperatures for river sites below Derby Dam are significantly lower than predicted by the temperature-altitude correlation for the preceding reach because of reduced flows, changes in channel characteristics, and at low flows the effect of ground-water inflow. Figure 17B and D show that both harmonic amplitudes and maximum observed temperatures increase with decreasing altitude, and the relations have different slopes in the Upper and Lower Truckee Rivers. In the Upper Truckee River subunit, the relationship is poor ($r=0.21$) and the regression line provides only a slight improvement in predictions of maximum temperatures over the mean (mean error of 1.1° versus standard deviation of the mean of 1.0°). As in the Carson basin, the harmonic phase lag correlates well with altitude for all sites along the Truckee River (fig. 17C).



Relations between stream-temperature characteristics and altitude in the Carson River basin can be used to estimate the temperature regimen for ungaged sites. ***(FIGURE 16)***



Relations between stream-temperature characteristics and altitude in the Truckee River basin can be used to estimate the temperature regimen for ungaged sites. *(FIGURE 17)*

For applicable reaches, the relations in figures 16 and 17 may be used to obtain estimates of water temperature at sites without historical data. For example, the equations in figure 17 yield the following estimates for a site on the Truckee River with an altitude of 4,400 feet.

Mean annual temperature (M) (fig. 17A) equals 10.1 degrees, with a standard error of ±0.4 degree.

Harmonic amplitude (A) (fig. 17B) equals 7.6 degrees, with a standard error of ±0.2 degree.

Seasonal maximum temperature (A + M) equals 17.7 degree.

Maximum observed temperature (1970-79) (fig. 17D) equals 21.6 degrees, with a standard error of ±0.7 degree.

Harmonic phase angle (fig. 17C) equals 157 days.

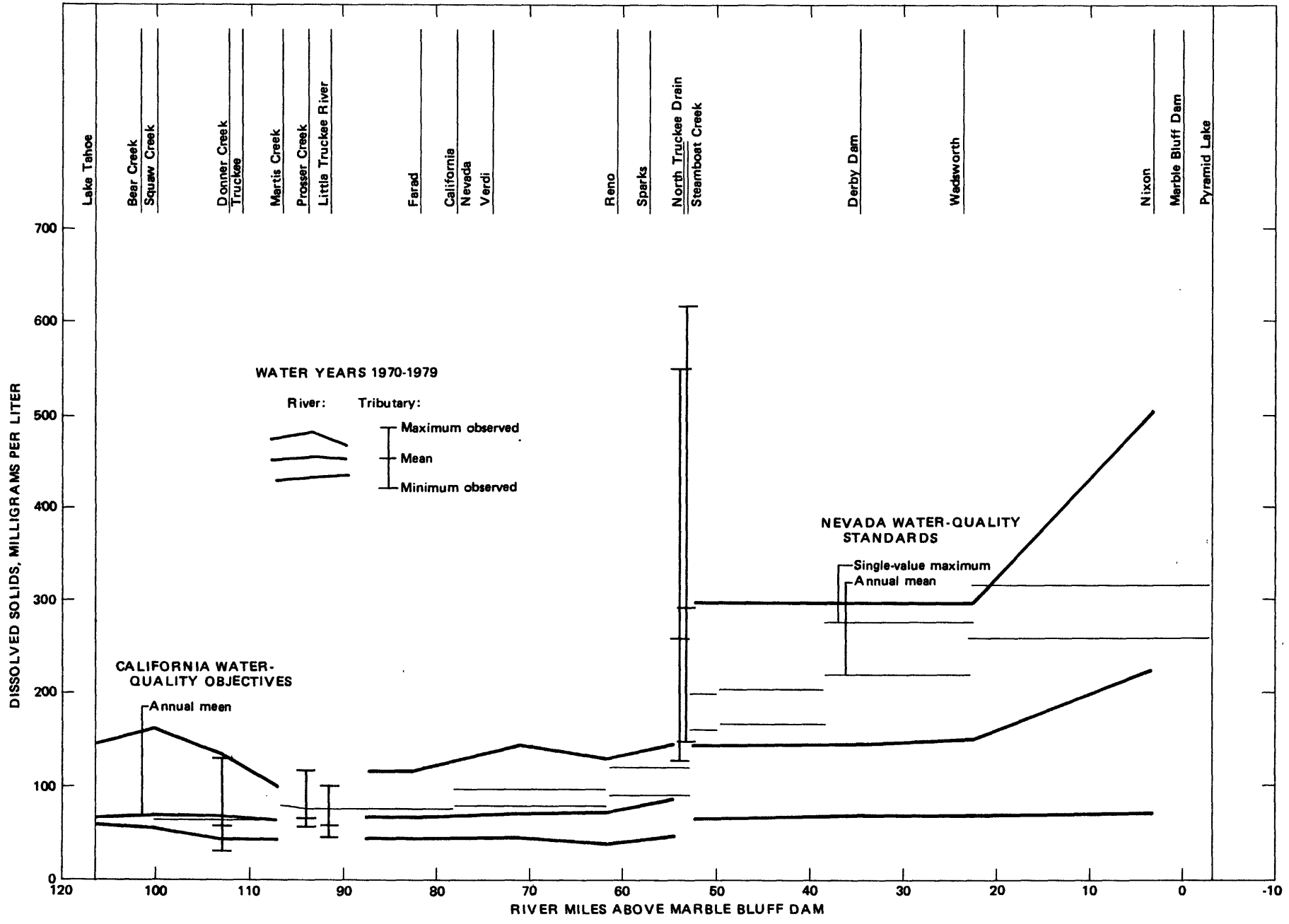
The harmonic coefficient can be used in the harmonic equation (p. 45) to obtain estimates of seasonal temperatures for the unmeasured site.

Dissolved Solids

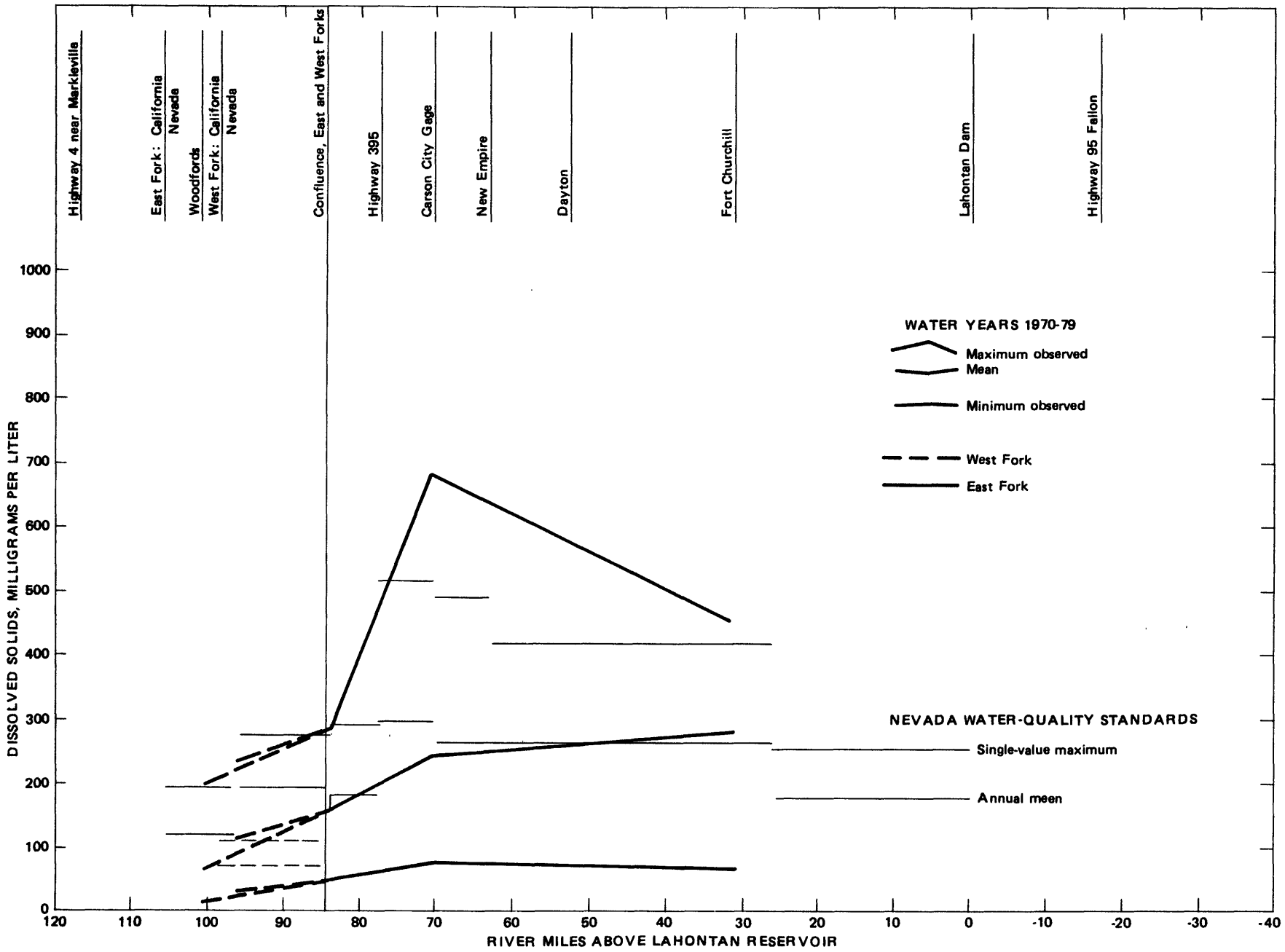
The water-quality regimens of the Truckee and Carson Rivers with respect to dissolved solids are illustrated by the profiles in figures 18 and 19. Data were obtained from the USGS, NDEP and DRI for sites in operation for water years 1970 through 1979. Dissolved-solids data shown for DRI stations are estimates based on regression analyses of dissolved solids determined by evaporation versus dissolved solids expressed as sum of major ionic constituents.

Concentrations of dissolved solids increase in a downstream direction in the Truckee River (fig. 18) in response to loads of solutes received from ground water and tributary inflows and from agricultural and urban nonpoint sources.

The profile for mean concentrations shows little change in dissolved solids in the Upper Truckee River subunit between the outlet of Lake Tahoe and Farad. In this same reach minimum concentrations decrease slightly due to the diluted water from Lake Tahoe by tributaries during snowmelt periods. The profile for maximum concentrations observed in the 1970-79 period reflects conditions during the drought period of 1977-78 when flows in the reach from Lake Tahoe to Truckee were composed largely of ground-water accretions.



Dissolved-solids profiles for the Truckee River show that California and Nevada water-quality standards for annual mean concentrations were generally met for 1970-79. *(FIGURE 18)*



Dissolved-solids profiles for the Carson River show that Nevada water-quality standards for annual mean concentrations were generally met for 1970-79. *(FIGURE 19)*

From Farad to the confluence of North Truckee Drain and Steamboat Creek, mean concentrations of dissolved solids increase from 66 to 82 mg/L. Input loads in this reach are derived from suburban and agricultural development in the vicinity of Verdi and urban runoff in the Reno-Sparks area. North Truckee Drain and Steamboat Creek contribute significant loads of dissolved solids to the river, with a resulting increase in the mean concentration to 133 mg/L below Steamboat Creek. Agricultural returns and urban runoff contribute to the dissolved solids loads of both tributaries. In addition, Steamboat Creek receives the highly mineralized waters of Steamboat Hot Springs and the effluents of the Reno-Sparks sewage treatment plant. Below Steamboat Creek, mean dissolved solids increase from 133 mg/L to 155 mg/L at Wadsworth in response to agricultural returns and diminished streamflow from diversions at Derby Dam. The greatest increase in mean dissolved solids in the Truckee River system is in the Lower Truckee River subunit, from 155 mg/L at Wadsworth to 226 mg/L at Nixon as a result of accretions of ground waters.

As shown in figure 18, dissolved solids in the Truckee River generally met applicable California and Nevada water-quality standards. Exceptions were the maximum observed concentrations for the 1970-79 period that exceeded Nevada single-value standards at all points during the 1977-78 drought period.

In the Carson River Basin (fig. 19) mean concentrations of dissolved solids increased from about 100 mg/L or less in the East and West Fork subunits to about 250 mg/L below Carson City in the Eagle-Dayton Valley subunit in response to irrigation returns and sewage effluents. Irrigation returns and ground-water inflows result in a further increase in mean concentrations to 280 mg/L at Fort Churchill, 30.8 miles above Lahontan Dam.

Maximum concentrations of dissolved solids followed a similar trend, but with more variability. Maximums occurred during various low-flow periods during the 1970-79 span.

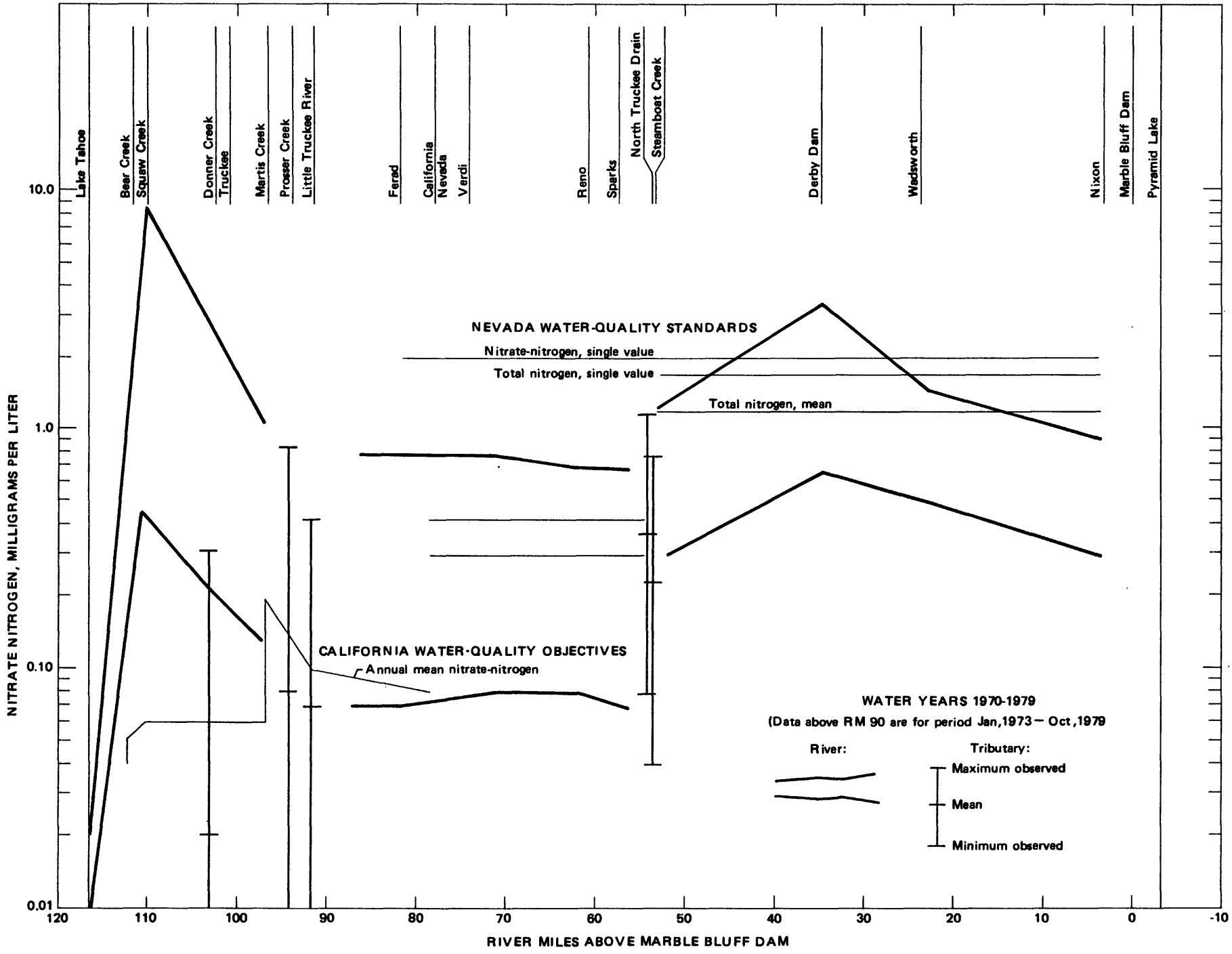
Mean concentrations of dissolved solids for 1970-79 were less than applicable Nevada Water quality standards for annual averages except at Fort Churchill (280 v. 250 mg/L). Maximum concentrations exceeded single-value standards at West Brockliss Slough (West Fork, river mile 87.4), below Carson City and at Fort Churchill.

Nitrate-Nitrogen (N)

Changes in nitrate-nitrogen concentrations (expressed as N) through the Truckee River (fig. 20) reflect the effects of sewage effluents, urbanization, and irrigation returns on the nitrogen budget of the river. Prior to 1978, five individual sewage treatment facilities existed in the Upper Truckee River subunit between Lake Tahoe and Martis Creek, with subsurface disposal in the Bear and Squaw Creek basins, along the east side of the Truckee River in the vicinity of Squaw Creek, and at Truckee. Since 1978, a regional tertiary sewage-treatment facility has been operated by the Truckee-Tahoe Sanitation Agency (TTSA), with subsurface discharge near the mouth of Martis Creek. The profiles for nitrate concentrations above river mile 90 in figure 20 are strongly influenced by the pre-1978 disposal practices, resulting in an increase of mean nitrate concentrations from 0.01 mg/L at the outlet of Lake Tahoe to 0.45 mg/L at the confluence of Squaw Creek. Biological assimilation and dilution from tributary inflows reduced the average concentrations to 0.07 mg/L at Farad, above the California-Nevada State line. Contributions of nitrate from agricultural returns and sewage effluents to North Truckee Drain and Steamboat Creek raised the mean concentration in the river by a factor of 4 from 0.07 mg/L above North Truckee Drain to 0.30 mg/L below Steamboat Creek. The effects of nitrification (conversion of ammonia to nitrate) of effluent from the Reno-Sparks sewage-treatment plant on Steamboat Creek resulted in a doubling of the mean nitrate concentration (from 0.30 to 0.66 mg/L) in the reach from Steamboat Creek to Derby Dam. Below Derby Dam, biological assimilation in the river and uptake by agricultural diversions resulted in a reduction of mean nitrate concentrations to 0.30 mg/L at Nixon.

Maximum nitrate concentrations for the 1970-79 period followed the same general trends as the mean concentrations. At most sites, the maximum concentrations occurred during the 1977-78 drought period, and a maximum concentration for the Truckee River of 8.6 mg/L occurred above Squaw Creek during a period when no water was being released from Lake Tahoe.

California water-quality objectives shown in figure 20 for nitrate are based on the post-1978 operation of the regional TTSA tertiary treatment plant at Martis Creek. Mean concentrations of nitrate for the historical period 1973-79 exceeded the 1980 objectives at all points above Martis Creek. Nevada has two sets of standards that may be applied to nitrate concentrations in the Truckee River; an upper limit of 2.0 mg/L nitrate-nitrogen for the entire Nevada reach of river that is based on fish toxicity considerations, and single-value and annual-average limits for total nitrogen that are specific to individual subreaches. During extreme low-flow periods, maximum observed nitrate concentrations exceeded the single-value standards for total nitrogen at all sites above Nixon and exceeded the toxicity standard for nitrate-nitrogen in the reach from Steamboat Creek to Derby Dam. Average nitrate concentrations for the 1970-79 period were below applicable Nevada standards for total nitrogen in all reaches of the river.



Nitrate-nitrogen profiles for the Truckee River show that concentrations exceeded certain California and Nevada water-quality standards for 1970-79. *(FIGURE 20)*

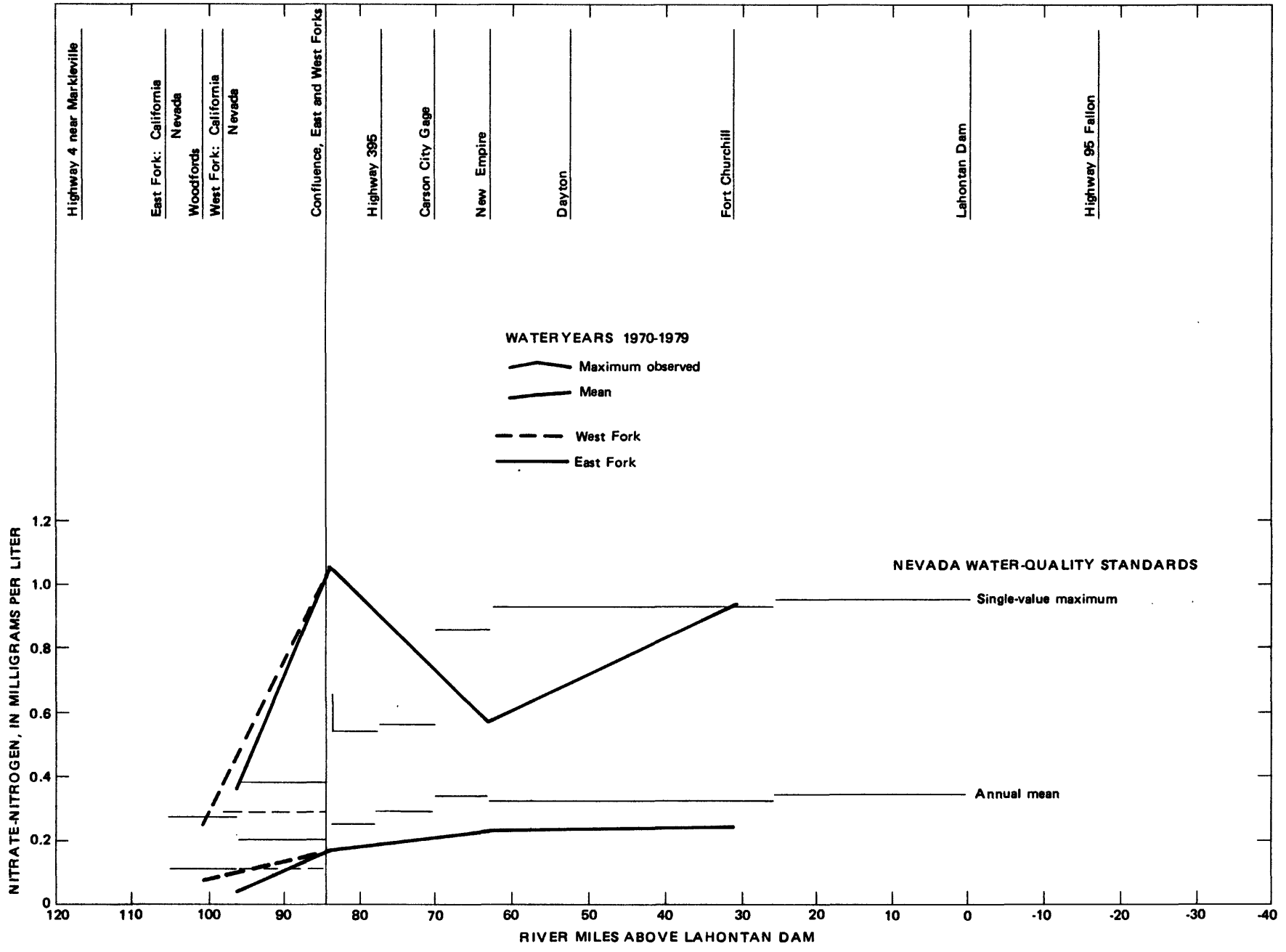
Nitrate concentrations in the Carson River (fig. 21) also increase from the headwaters downstream to Lahontan Reservoir in response to the effects of sewage effluents and agricultural irrigation return flow. Concentrations in the East and West Fork subunits averaged less than 0.1 mg/L for the 1970-79 period. Mean nitrate concentrations increased through Carson Valley to 0.17 mg/L below the confluence of the East and West Forks. Additional agricultural returns and sewage effluents from Carson City raised the average concentration to 0.23 mg/L at New Empire below Carson City. From this point to the last long-term monitoring site below Fort Churchill, average concentrations remained at about 0.2 mg/L.

Maximum nitrate concentrations observed during the 1970-79 period ranged from 0.25 mg/L on the West Fork to 1.1 mg/L below the confluence of the East and West Forks. Maximum concentrations of nitrate generally were observed during low-flow periods; however, unlike the Truckee River, maximums in the Carson River did not consistently occur during the 1977-78 drought.

Mean nitrate concentrations at all sites for the 1970-79 period were less than applicable Nevada water-quality standards. Maximum single-value concentrations exceeded standards during 1970-79 at two sites: below the confluence of the East and West Forks in Carson Valley, and below Fort Churchill.

INFORMATION USED IN HYDROLOGIC STUDIES

Basic information on which hydrologic studies are based constitutes a wide variety of maps, photographs, surveys, data, and reports. The following sections describe such information and its sources for the Truckee and Carson River basins, and offer insights as to how the information is applied. The sections refer to extensive computerized tabulations of data for ready access by local users and refer the reader to methods for access to new data and data that cannot be conveniently reported herein.



Nitrete-nitrogen profiles for the Carson River show that Nevada water-quality standards were generally met for 1970-79. *(FIGURE 21)*

Computerized Data Files

Most of the data on physical and chemical characteristics of water for the rivers are contained in a computerized data bank called WATSTORE (The National Water Data Storage and Retreival system) that is administered by the U.S. Geological Survey. These data are accessible to local users primarily through the assistance of the District Office, Water Resources Division, Carson City, Nev. In addition to the data, application programs are available in WATSTORE for printing data in a specified format or performing a variety of statistical analyses on the data. Also, other programs exist to provide interface of the water data with program libraries such as STATPAC (U.S. Geological Survey) and the Statistical Analysis System (SAS)[1] (Helwig and Council, 1979). Examples of streamflow data extracted and reduced using WATSTORE programs are shown on plate 3.

Special Files for the Study Area

To determine the availability and pertinence of existing hydrologic data as related to the study goals (p. 2), the authors systematically compiled four major data files:

(1) Basic Hydrographic Data for the Truckee and Carson River Basins,
(2) Hydrologic Data Sites and Operating Agencies,
(3) Topographic and Orthophotographic Map Coverage, and
(4) Bibliography of published and unpublished reports and papers.

The contents of the first two files are contained in Supplemental Data A and B. Access to topographic and orthophotographic maps is explained on page 65. The bibliography is contained on magnetic disk; it has not been published in other formats.

The Basic Hydrographic Data and Hydrologic Data Sites files contain the names of sites along the rivers and their principal tributaries, site numbers for gaging and sampling sites and the names of agencies who operate them, drainage areas, river mileage, and river channel altitudes. The files contain about 2,500 entries, and are fairly exhaustive as to other riverine features such as points of confluence of tributary streams, points of diversion and return flows, dams, bridges, powerline crossings, sewage discharge points, and river-touring data.

---

[1]The use of trade names in this report is for identification purposes only and does not constitute endorsement by the U.S. Geological Survey.

Maps and Orthophotographs

The essential foundations for the hydrologic studies reported here are topographic maps and orthophotographs. All hydrologic and hydrographic information must be keyed accurately to places that a data user can readily find on a map or in the field. Many basic hydrographic measurements, such as drainage basin areas and distance between points along rivers, are dependent for their accuracy on the quality of maps.

During the period 1974-80, virtually the entire study area was rephotographed and remapped by the Geological Survey in detail far superior to that available before. The use of new materials has resulted in the discovery of significant errors in certain hydrographic information, and more accurate refinement of other data.

The basic maps for the study area are topographic maps at a scale of 1:24,000, covering 7½ minutes of latitude and longitude, or an area ranging from about 57 to 59 mi^2 in the general area. Because longitude lines converge, the precise map area is a function of latitude. The foundation for the maps is high-quality, black-and-white aerial photographs and field surveys. Users should be aware that the photographs are available for purchase at a nominal cost from the Geological Survey, and are highly useful for many regional and local studies. The aspects of the photographs and how to obtain them are discussed in the following section on aerial imagery.

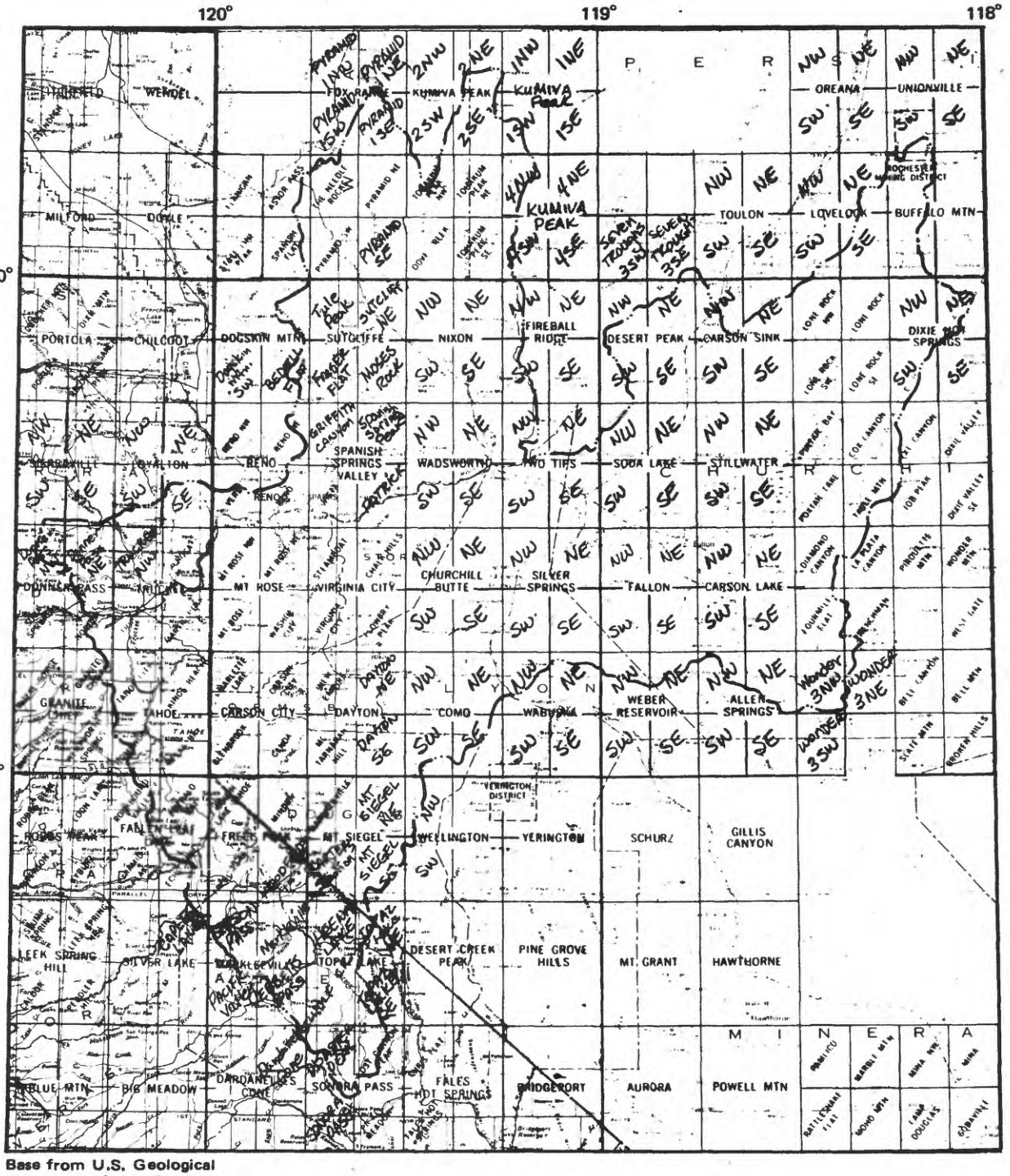
The photographs taken in 1974 and 1976 over most of the study area are being used to produce a new kind of map called an orthophotograph. This map is produced in the same basic format as the 7½-minute quadrangle, and looks like a large black-and-white aerial photograph with place names and other topographic information superimposed. The art of such mapping is advancing to the state where the orthophotographs eventually will be produced in color and contain the basic overprinted information, such as contour lines, now seen on the standard 7½-minute topographic map. However, as of January 1981, no color orthophotographs existed for the study area. The advance editions of orthophotographs contain no overprinted information, but are highly useful in locating specific features and making precise measurements. Orthophotographs for about 90 percent of the study area are available for purchase from the Geological Survey. These are available on expensive, scale-stable, translucent film for precision uses or on relatively inexpensive paper for reconnaissance and other work where precise measurements are not required.

Figure 22 shows the status of Geological Survey mapping for the study area as of January 1981. The status after that date is available as described below. Basically, the study area is included within 181 quadrangles, each covering 7½ minutes of latitude and longitude. Color topographic maps at a scale of 1:24,000 exist for 78 of these areas. Blackline topographic maps at the same scale exist for an additional 23 areas. Orthophotographic advance images at the same scale exist for 155 of the 181 areas, many overlapping the color and blackline topographic coverage. There are 10 orthophotographs having some overprinted topographic information for the Reno-Carson City-Carson Valley vicinity. There are also 47 quadrangles, each covering 15 minutes of latitude and longitude at a scale of 1:62,500, but most of these were produced prior to 1960 and much of the information that they contain is outdated. A new series of maps at a scale of 1:100,000 is being prepared, and advance blackline or published color coverage is now available for the entire study area.

The status of mapping can be ascertained through the Geological Survey State Office, Carson City, Nev. Maps and orthophotographs can be ordered from distribution centers in Menlo Park, Calif., or Denver, Colo., according to the quantities of products desired by the user.

Aerial Photography and Imagery

In the preceding section, the use of aerial photographs was accorded its significant function in the production of maps was described. In addition, aerial photographs provide invaluable information in many other hydrographic applications, ranging from monitoring of change in water uses to the simple illustration of an immediate problem. Because aerial photographs are obtained not only for hydrologic purposes but also for many applications in other fields, the scope of the information presently available is almost overwhelming. Thus, the supposedly straightforward process of determining the availability of aerial photographs for a given area can become a major research project when actually attempted. For example, a request for an inventory of photographs of the study area vicinity taken by the National Aeronautics and Space Administration (NASA) between 1969 and 1979 yielded a computer printout indicating 2,127 photographs. Because the request was issued for photographs of only a specific quality, the printout therefore indicated perhaps only half of the total photographs available. The NASA products are color and color-infrared transparencies produced by using film widths of 2.2 inches or, more commonly, 9.0 inches. The transparencies are generally of exceptional quality and resolution, and may be obtained by the general public in any of a variety of formats as described below.



Base from U.S. Geological Survey, California State base, 1:1,000,000, 1970

The Truckee and Carson River basins cover about 7,300 square miles, for which a variety of maps and orthophotographs exist. The map names shown here may be used as a guide to inquiries about the status of mapping. Horizontal names indicate 15-minute-series mapping, and slanted names indicate 7 1/2-minute-series mapping, although other mapping series are also available.

(FIGURE 22)

In additon to NASA photographs, there exists a body of aerial mapping photography by the Geological Survey. This is used for the production and revision of topographic maps and orthophotographs, and is generally available as black-and-white images in a variety of formats. The basic format is 9 by 9 inches, and shows areas of from 3 to 9 miles on a side depending upon scale. Again, the photographs are of excellent quality and resolution, and are available for selected parts of the study area for intermittent periods beginning in 1938.

To complement the aerial photography, there is also an abundant store of satellite imagery which has been produced from the Landsat series of satellites that began scanning the Earth's surface in 1972. The satellites receive visible and near-visible electromagnetic radiation from features on the land below, and transmit this information to ground stations for processing. The radiometric information can be composited and enhanced by computer methods to produce images that look like high-resolution photographs of large areas of the Earth. Each image covers an area about 115 miles on a side, and shows the broad overview with exceptional clarity, such as that for the Fallon area (fig. 23). Because the coverage of a given area is repetitive (every 9 or 18 days), the imagery is an excellent tool for monitoring such changes as the extent of the snowpack on the Sierra Nevada, the extent of acreage of irrigated agriculture in the vicinity of Fallon, or the size of water bodies throughout the study area. The entire study area and much of its surrounds are covered by four basic scenes, and several hundred images of each scene exist for the period 1972-81. A given scene for a particular date may be ordered in many forms including color transparencies, color paper prints, and black-and-white paper prints.

Information on the availability of any of the aforementioned photography and imagery, its cost, and how to order it is available through the following principal source:

User Services Unit
EROS Data Center
Sioux Falls, South Dakota 57198
Phone: (605) 594-6151
FTS: 784-7511

Examples of photographs and images for the Truckee and Carson River basins are available at the Geological Survey State Office, Carson City, Nev. This office will also provide requestors with local sources of aerial photography such as commercial firms and agencies of the State of Nevada that also maintain extensive photo files.

This satellite image of the Fallon area, computer-enhanced from data received on September 16, 1979, shows the location and extent of irrigated fields in bright red against the lighter hues of the surrounding desert. Scale is approximately 1:250,000. *(FIGURE 23)*

River and Basin Morphology

The physical characteristics of the rivers and their basins important to the further interpretive work for the Truckee-Carson study are explained in the following sections. The major characteristics include drainage areas, river mileage, altitudes of the river beds, locations of gaging and sampling sites, and locations of dams and diversion structures.

Computation of Drainage Areas

The drainage areas of the 13 major subunits of the river basins (fig. 4, pl. 1A) and numerous smaller subdivisions were systematically determined in 1979, using 148 of the most current color and black-and-white advance topographic maps at scales of 1:62,500 and 1:24,000. Drainage boundaries were drawn on the appropriate maps, and areas thus delimited were determined by planimetry. The sum of planimetered areas was then compared to the computed area of the particular map. In this manner, the delimited areas were determined to be accurate within 1 percent with respect to the standard accuracy of the maps. The maps and associated computations are kept at the U.S. Geological Survey District Office, Sacramento, Calif. They should be used as the basis for further subdivision of drainage areas and for updating information as new topographic maps are produced. The package of maps and associated computations represents the first systematic attempt to measure drainage areas for the two river basins as a single hydrologic unit. As such, this work improves upon previous work done on maps of lesser quality, and major errors noted in earlier drainage area work were corrected.

Determination of River Mileage and Profiles

Although orthophotographic maps for the study area (p. 65) do not show altitude information, the maps are extremely useful for a variety of planimetric measurements. The 1974 and 1976 orthophotographic maps cover nearly all the Truckee and Carson River channels, and provide an up-to-date and consistent overview of the rivers. Distances along the rivers were easily measured on scale-stable versions of the maps by using electronic digitizers. Sites and altitudes were then located from associated topographic maps, photo-interpretation, and direct field work to produce the data needed to draw a river profile. Profiles for both rivers and selected associated information are shown and explained on plate 1. The data in Supplemental Data A may also be used to construct profiles at other scales or to show other types of information. As new altitude data become available for the river channels, the profiles may be refined accordingly.

The values shown in the data files and on the plates reflect only the river conditions shown on the orthophotographs from which they were measured and the accuracy of available altitude data. The length of the rivers may change with time and because of various construction activities such as channel realinement. River reaches particularly susceptible to natural change include the Carson River in the Carson Valley and just upstream from Lahontan Reservoir and the Truckee River between Wadsworth and Dead Ox Wash (pl. 1A).

SUMMARY

The Truckee and Carson River basins, because of their interconnecting diversion structures, are considered a single hydrologic unit. This unit encompasses 7,257 mi^2 and extends from the crest of the Sierra Nevada in California to the basins of Pyramid Lake and Carson Sink in Nevada. Within the unit lie urban areas of Reno-Sparks, Carson City, and those surrounding Lake Tahoe; agricultural areas in the Carson Valley and surrounding Reno-Sparks, Fernley, and Fallon; and the Pyramid Lake Indian Reservation along the Lower Truckee River. The modern hydrologic system has evolved in attempts to accommodate the disparate demands in these areas for water of specified quantity and quality. However, all demands cannot be met given the severe stresses on a limited water supply during years of less than average flow. Thus, the directions of change in the hydrologic system remain uncertain pending the outcomes of litigation and other decisions as to what the quality and quantity of water should be at specific times and places along the river systems.

Plans for studies of flow and water quality led to the division of the two-basin system into 13 hydrologic subunits (Nowlin and others, 1980, p. 22). These subunits were defined on the basis of projected study needs using the inputs of local people concerned with water management. The subunits were selected to allow an assessment of major, immediate water-quality problems in the basin and to facilitate sampling and modeling efforts. The subunit boundaries generally encompass a set of similar hydrographic features that are significantly different from those in adjacent subunits. Sampling and modeling efforts were designed on that basis to measure and predict the changes that take place as flows move from one set of hydrologic conditions to another set imposed downstream.

The natural hydrologic system in the basins is characterized by a regular pattern of runoff. Flow volumes on major streams throughout the system generally peak during May each year and rapidly decline to annual lows during September. Rain and snow from October through March resupply the sources of flow, and flow volumes gradually increase during the winter. This common pattern dominates the ways in which water is allocated for its principal uses, primarily agricultural irrigation. To those who allocate and use the water, the runoff pattern is seen in three parts: (1) a period for water storage (autumn-winter); (2) a period of high runoff (spring); and (3) a period for irrigation (spring-autumn). The distinguishing elements of the hydrologic system arise from efforts to regulate and allocate flows according to the demands posed for each period. As of 1981, flows were regulated by the integrated operation of seven reservoirs in the Upper Truckee River subunit, diversions to the Truckee Canal at Derby Dam in the Middle Truckee River subunit, and operations at Lahontan Reservoir on the Lower Carson River. Allocations of flow are made using more than 150 primary diversion structures on the main stems of the rivers and hundreds more on the primary diversions.

The overall effects of water use on the resulting quantity of water downstream are similar for the Reno-Sparks area (Truckee Meadows) and the Carson Valley. Water is diverted from the rivers upstream from these areas, used for agricultural, municipal, and domestic purposes, and some is ultimately returned to the rivers via drains or treatment plants. The quantity of water lost to evapotranspiration is greater than that supplied by tributary streams and ground-water discharge. On the Truckee River, the average annual flow downstream from Truckee Meadows is about 96 percent of that upstream; for the Carson Valley, the comparable figure for the Carson River is 83 percent.

At Derby Dam on the Truckee, about 40 percent of the average annual river flow is diverted into the Truckee Canal. Some of this flow returns to the river via percolation from the canal bed and diversions to fields between the canal and river. Additional flow leaves or is diverted from the canal for irrigation in the Fernley area, and migrates to a small, closed basin outside either the Truckee or Carson basins. The remaining canal flow goes to Swingle Bench and Lahontan Reservoir.

Flows on the Truckee River downstream from Wadsworth provide almost the full sustenance for Pyramid Lake, a large water body that has been steadily declining in size since diversions began at Derby Dam in 1905. The extent to which the lake will ultimately decline or recover is contingent primarily on the results of pending litigation as to Truckee River flows downstream from Derby Dam. The average decline in water-surface altitude of the lake has been about 1 ft/yr during this century.

Water from both rivers is stored in Lahontan Reservoir on the lower Carson for release to agricultural uses surrounding Fallon. The water is distributed via a sprawling diversion and drain system to numerous sinks and ponds around the periphery of the agricultural area. Since Truckee Canal diversions at Derby Dam began in 1905, the local water table in the Fallon area has risen considerably, providing a lens of fresh water atop the existing saline aquifer. Some water leaving the agricultural area provides the environment for wildfowl in Stillwater National Wildlife Refuge and Carson Lake. Residual flows in the channel of the Carson River average less than 6 percent of the releases at Lahontan Dam and are evaporated in Carson Sink.

Detailed traveltime, dilution, and dispersion data were collected for the Truckee River between Truckee, Calif., and Marble Bluff Dam, Nev., and for the Truckee Canal between Derby Dam and Lahontan Reservoir. The data covered a wide range of flows and were used to construct graphs for estimating traveltime, dilution, and dispersion for any reaches within the endpoints described above.

Water quality of the rivers is directly related to use of the water as described by the flow distribution system described above. The dispersals of flows in the Truckee Meadows and Carson Valley dramatically affect water temperatures and the types and concentrations of constituents picked up by the diverted flows. Return flows via North Truckee Drain and Steamboat Creek are major sources of contaminants, funneling urban and agricultural runoff from a broad area into a short reach of the Truckee River at Vista. Agricultural return flows and ground-water seepage in the Carson Valley reach the river at many points throughout the valley and are concentrated in the flow at the valley outlet. Diversions from the Truckee River at Derby Dam substantially reduce the volume of flow in the lower river, and water temperatures consequently rise considerably there during the irrigation season. The higher temperatures in concert with nutrients supplied from upstream sources promote significant organic growth in the river and on its bed. Storage of the combined flows of the two rivers at Lahontan Reservoir results in the accumulation of contaminants, extensive algal blooms, fish kills, and occasional closures of the reservoir to recreational uses.

Major point sources of secondary-treated municipal and domestic sewage are the Reno-Sparks Sewage Treatment Plant that discharges to the Truckee River via Steamboat Creek at Vista, and the Carson City plant that discharges to the Carson River near Carson City. Secondary and tertiary-treated sewage from sources around Lake Tahoe and the Minden-Gardnerville area is used for agricultural irrigation in the Carson Valley before entering the river as part of the return flow. Tertiary-treated sewage from the North Lake Tahoe and Truckee areas percolates through an extensive alluvial leaching field before reaching the Truckee River near Martis Creek.

Data on stream temperature, dissolved solids, and nitrate-nitrogen (N) were compiled for water years 1970-79 for both rivers. These data were used to develop predictive relations for daily stream temperatures, and profiles of changes in dissolved-solids and nitrate-nitrogen concentrations with distance along the rivers. The data showed that California and Nevada standards for the three water-quality characteristics were generally met for the 1970-79 period.

Existing hydrologic and hydrographic data were culled from the files of various agencies and compiled for systematic use in this and future studies. The hydrologic data, principally the physical and chemical characteristics of water, are contained in a large, national data bank called WATSTORE. All data in this bank are directly accessible to the general community of users of water data. Other data not available through WATSTORE or new data derived specifically for this study were compiled in additional files reported herein. These include such information as river mileages, drainage areas, locations of diversions and other structures, hydrologic data sites and the agencies that operate them, and other riverine data specific to the study area. To aid in this and future studies, the status of topographic and orthophotographic mapping and aerial photography and imagery for the basins was also compiled. The wealth of new information in these categories was found to be an important adjunct to remapping and refining hydrographic information for the basins.

ACKNOWLEDGMENTS

The authors gratefully acknowledge the support of many people and agencies who provided data, consultation, and direct work on the production of this report: California Department of Water Resources; Nevada Division of Environmental Protection; University of Nevada Research Institute; Office of the Federal Water Master, Reno, Nev.; U.S. Public Health Service; Kaiser Engineers, Oakland, Calif., Frederick R. McLaren Environmental Engineering, Sacramento, Calif.; Univerity of Nevada, Reno, Department of Natural Resources; U.S. Fish and Wildlife Service; U.S. Army Corps of Engineers; U.S. Bureau of Reclamation; U.S. Forest Service; U.S. Soil Conservation Service; Truckee-Carson Irrigation District, Fallon, Nev.; Sierra Pacific Power Company, Reno, Nev.; and Lahontan Regional Water-Quality Control Board, Sacramento, Calif.

Several people from the U.S. Geological Survey provided substantial services and original work in the production of this report. Margaret A. Rawson, National Mapping Division, Reston Va., compiled several illustrations, including the exceptional isometric projection shown on plate 3. Ronald L. Rogers, Water Resources Division, Sacramento, Calif., also compiled many of the maps and illustrations. Shirley J. Kaus, Water Resources Division, Menlo Park, Calif., produced the detailed drainage-area maps and data. Valerie Schacher, Water Resources Division, Carson City, Nev., compiled, updated, and checked the extensive supplemental data tabulations. To these and others who helped in the production and review of this report, we offer our sincere thanks for your valuable assistance.

SELECTED REFERENCES

Bauer, D. P., Rathbun, R. E., and Lowham, H. W., 1979, Traveltime, unit-concentration, longitudinal-dispersion, and reaeration characteristics of upstream reaches of the Yampa and Little Snake Rivers, Colorado and Wyoming: U.S. Geological Survey Water-Resources Investigations 78-122, 66 p.

Clarke, P. F., Hodgson, H. E., and North, G. W., 1981, A guide to obtaining information from the USGS: U.S. Geological Survey Circular 777, 42 p.

Collings, M. R., 1969, Temperature analysis of a stream: U.S. Geological Survey Professional Paper 650-B, p. B174-B179.

Crippen, J. R., and Pavelka, B. R., 1970, The Lake Tahoe basin, California-Nevada: U.S. Geological Survey Water-Supply Paper 1972, 56 p.

Glancy, P. A., and Katzer, T. L., 1975, Water-resources appraisal of the Carson River basin, Western Nevada: Water-Resources Reconnaissance Series, Report 59, State of Nevada, Department of Conservation and Natural Resources, Division of Water Resources.

Glancy, P. A., Van Denburgh, A. S., and Burn, S. M., 1972, Runoff, erosion, and solutes in the lower Truckee River, Nev., in 1969: Journal of the American Water Resources Association, v. 8, no. 6, p. 1157-1172.

Harding, S. T., 1935, Changes in lake levels in the Great Basin area: Civil Engineering, v. 5, p. 87.

Harris, E. E., 1970, Reconnaissance bathymetry of Pyramid Lake, Washoe County, Nev.: U.S. Geological Survey Hydrologic Investigations Atlas HA-379.

Helwig, J. T., and Council, K. A., eds., 1979, SAS user's guide: Raleigh, N.C., SAS Institute, Inc., 475 p.

Hubbard, E. F., Kilpatrick, F. A., Martens, L. A., and Wilson, J. F., Jr., 1981, Measurement of time of travel and dispersion in streams by dye tracing: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A9, 87 p.

Katzer, T. L., 1971, Reconnaissance bathymetric map and general hydrology of Lahontan Reservoir, Nev.: Water Resources-Information Series, Report 9, State of Nevada, Department of Conservation and Natural Resources, Division of Water Resources.

King, Clarence, 1878, United States geological explorations of the fortieth parallel, volume 1, systematic geology: Washington, U.S. Government Printing Office, 803 p.

Nowlin, J. O., Brown, W. M., III, Smith, L. H., and Hoffman, R. J., 1980, Planning and design of studies for river-quality assessment in the Truckee and Carson River basins, California and Nevada: U.S. Geological Survey Open-File Report 80-435, 75 p.

Pyramid Lake Task Force, 1971, A study of water rights and their enforcement--Lake Tahoe, Truckee, and Carson River basins: U.S. Department of the Interior, Office of the Solicitor, Sacramento, Calif., 170 p.

Richins, R. T., and Risser, A. C., 1975, Total mercury in water, sediment, and selected aquatic organisms, Carson River, Nev.: Pesticides Monitoring Journal, v. 9, no. 1, p. 44-54.

Rush, F. E., 1968, Index of hydrographic areas in Nevada: Nevada Division of Water Resources Information Report 6, 38 p.

Russell, I. C., 1885, Geological history of Lake Lahontan, a quaternary lake of northwestern Nevada: U.S. Geological Survey Monograph 11, 288 p.

Steele, T. D., 1974, Harmonic analysis of stream temperatures: U.S. Geological Survey computer contribution, 246 p.

Taylor, R. E. L., 1972, The effects of increasing salinity on the Pyramid Lake fishery: Univ. of Nevada, Max C. Fleishmann College of Agriculture, Reno, Nev., Agricultural Experiment Station Bulletin 15, 7 p.

U.S. Geological Survey, 1975-79, Water resources data for Nevada, water years 1975-79: U.S. Geological Survey Water Data Reports NV-75-1 to NV-79-1.

U.S. Department of the Interior, 1935, Truckee River agreement: Approved as to form by Harold L. Ickes, Secretary of the Interior, 20 p.

United States of America v. Orr Water Ditch Co., and others, 1944, Final decree--In Equity, Docket no. A3: District Court of the United States in and for the District of Nevada, 88 p.

Van Denburgh, A. S., 1973, Mercury in the Carson and Truckee River basins of Nevada: U.S. Geological Survey Open-File Report, 8 p.

Van Denburgh, A. S., Lamke, R. D., and Hughes, J. L., 1973, A brief water-resources appraisal of the Truckee River basin, western Nevada: Water Resources-Reconnaissance Series, Report 57, State of Nevada, Department of Conservation and Natural Resources, Division of Water Resources.

Ward, C. J., 1963, Annual variation of stream temperature: American Society of Civil Engineers, Journal of the Sanitary Engineering Division, v. 89, no. SA6, p. 1-16.

page 79 follows

SUPPLEMENTAL DATA

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins

Key No.: Arbitrary reference number for the site, used for cross reference in Supplemental Data B.

Site: Prinicipal physical feature of the site.

Hydrologic data collection:

Agency: Agency or organization collecting data at the site. CDWR, California Department of Water Resources; DRI, University of Nevada Desert Research Institute; FWM, U.S. Federal Watermaster, Reno; HEW, U.S. Public Health Service; KE, Kaiser Engineers; LE, Lider, E.L., Baily, C.J., and Koch, D.L., 1980, Algal growth potentials in the Truckee River, Lahontan Reservoir, and Pyramid Lake, Nevada: University of Nevada Desert Research Institute Publication 50017, 47 p.; MCEE, Frederick R. McLaren Environmental Engineering; NDEP, Nevada Division of Environmental Protection; PEL, Pacific Environmental Laboratories; RS, Nevada Division of Environmental Protection for the Reno-Sparks Sewage Treatment Plant discharge permit; UDRR, University of Nevada, (Reno) Department of Natural Resources; UFWS, U.S. Fish and Wildlife Service; USGS, U.S. Geological Survey; WQCP, California Regional Water Quality Control Board, Lahontan Region.

Agency site No.: Primary identification number used by the reporting agency or organization.

Drainage area, in square miles: Digitized from available topographic maps (1979).

River miles:

Above mouth: Marble Bluff Dam and Lahontan Reservoir are considered to be the mouths.

Below source: The outlet of Lake Tahoe and Derby Dam are considered to be the source of the Truckee River and Truckee Canal, respectively.

Altitude, in feet above sea level: Approximate altitude of water surface of an average streamflow; for most sites interpolated from topographic maps; at selected gages determined from gage datum for average discharge for period of record.

Average slope, in feet per mile: Average slope from stream source to site.

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1	Lake Tahoe at Tahoe City, CA	USGS CDWR	10337000 G7 1710.	505.69	116.27	0.00	6229.1	
2	Truckee River at Lake Tahoe Outlet Dam California Water-Quality Objectives	WQCP		505.69	116.27	0.00	6219.	0.0
3	Highway 89 bridge				116.25	0.02	6219.	0.0
4	Truckee River at Tahoe City, CA	USGS DRI CDWR MCEE KE	10337500 T 26 G7 1665. R-1 S 1	506.84	116.20	0.07	6218.	14.3
5	Road bridge				116.05	0.22	6216.	13.6
6	Altitude contour				115.00	1.27	6200.	15.0
7	Private road bridge River-touring put-in (Class I)				114.90	1.37	6199.	14.6
8	Private road bridge				114.15	2.12	6190.	13.7
9	Gas tanks (right bank) Egg site				113.90	2.37	6186.	13.9
10	Footbridge				113.20	3.07	6178.	13.4
11	Unnamed tributary (left bank)				113.15	3.12	6177.	13.5
12	Road bridge				112.85	3.42	6174.	13.2
13	River Ranch: River-touring take-out, rapids				112.20	4.07	6166.	13.0
14	Bridge downstream from River Ranch river-touring, Class III, (right bank)				112.10	4.17	6164.	13.2
15	Truckee River above Bear Creek (left bank) California Water-Quality Objectives	WQCP			111.84	4.43	6161.	13.1
16	Upper Bear Creek at Bridge below Alpine Meadows	UDRR	28				6720.	
17	Lower Bear Creek below Alpine Meadows road	UDRR	27				6320.	
18	Bear Creek at Mouth California Water-Quality Objectives	MCEE WQCP	I-2				6200.	
19	Bear Creek at mouth							
20	Truckee River below Bear Creek (left bank) California Water-Quality Objectives	WQCP			111.84	4.43	6161.	13.1
21	Altitude contour				111.75	4.52	6160.	13.1
22	Truckee River 100 Yards above Cinder Cone Spring	MCEE	S-1		111.52	4.75	6145.	15.6
23	Wright (Cinder Cone) Spring #1	DRI MCEE	T 103 I-1				6200.	
24	Truckee River 25 Yards below Cinder Cone Spring	MCEE	S-3		111.50	4.77	6143.	15.9

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
25	Truckee River 100 Yards below Cinder Cone Spring	MCEE	S-2		111.49	4.78	6143.	15.9
26	Highway 89 bridge				111.40	4.87	6137.	16.8
27	Altitude contour				111.15	5.12	6120.	19.3
28	Private road bridge				110.95	5.32	6105.	21.4
29	Wright (Cinder Cone) Spring #2	DRI	T 104				6240.	
30	Cinder Cone Spring #2	MCEE	I-1A				6120.	
31	Private road bridge				110.85	5.42	6098.	22.3
32	Altitude contour				110.60	5.67	6080.	24.5
33	Private road bridge				110.40	5.87	6070.	25.4
34	Truckee River above Squaw Creek	DRI	T 27		110.16	6.11	6058.	26.4
35	Truckee River above Squaw Creek (left bank)				110.12	6.15	6056.	26.5
36	Upper Squaw Creek .25 Miles below Ice Rink	UDRR	25				6195.	
37	Squaw Creek at Squaw Valley Road at Squaw Valley, CA	USGS	10337850				6200.	
38	Squaw Creek at Highway 89 at Squaw Valley, CA	USGS UDRR CDWR MCEE	10337855 26 G7 1662.01 I-3				6080.	
39	Squaw Creek at mouth California Water-Quality Objectives	WQCP						
40	Truckee River below Squaw Creek (left bank) California Water-Quality Objectives	WQCP			110.12	6.15	6056.	26.5
41	River-touring take-out and put-in, Class II, (left bank)				110.10	6.17	6055.	26.6
42	Altitude contour				109.80	6.47	6040.	27.7
43	Private road bridge				109.60	6.67	6035.	27.6
44	Private road bridge				109.40	6.87	6030.	27.5
45	Deer Creek (right bank)				109.33	6.94	6028.	27.5
46	Truckee River at Silver Creek Campground	MCEE KE	R-2 S 2		109.18	6.99	6027.	27.5
47	Silver Creek (left bank)				109.10	7.17	6023.	27.3
48	Private road bridge				108.80	7.47	6015.	27.3
49	Private road bridge				108.70	7.57	6013.	27.2
50	Altitude contour				108.20	8.07	6000.	27.1
51	Truckee River above Pole Creek (left bank)				108.12	8.15	5998.	27.1

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
52	Pole Creek							
53	Pole Creek above Highway 89	UDRR	24				6020.	
54	Pole Creek at mouth							
55	Truckee River below Pole Creek (left bank)				108.12	8.15	5998.	27.1
56	Private road bridge				108.00	8.27	5995.	27.1
57	Unnamed tributary (right bank)				106.87	9.40	5970.	26.5
58	Private road bridge				106.75	9.52	5967.	26.5
59	Truckee River above Deep Creek (left bank)				106.45	9.82	5960.	26.4
60	Deep Creek							
61	Deep Creek at Highway 89	UDRR	23				5990.	
62	Deep Creek at mouth							
63	Truckee River below Deep Creek (left bank)				106.45	9.82	5960.	26.4
64	Altitude contour				106.43	9.84	5960.	26.3
65	Rocky Wash Creek (left bank)				105.92	10.35	5932.	27.7
66	Altitude contour				105.70	10.57	5920.	28.3
67	Brush Creek (left bank)				105.47	10.80	5913.	28.3
68	Cabin Creek (left bank)				105.00	11.27	5900.	28.3
69	Truckee River above unnamed tributary (left bank)				104.85	11.42	5896.	28.3
70	Truckee River Tributary near Truckee, CA	USGS CDWR	10337900 G7 1610.	1.11			5920.	
71	Truckee River below unnamed tributary (left bank)				104.85	11.42	5896.	28.3
72	Altitude contour				104.30	11.97	5880.	28.3
73	Truckee River near Truckee, CA	USGS KE CDWR	10338000 S 3 G7 1600.	553.	103.62	12.65	5864.	28.1
74	Truckee River at Granite Flat Campground	MCEE	R 3	552.	103.00	13.27	5849.	27.9
75	Altitude contour				102.60	13.67	5840.	27.7
76	Truckee River above Donner Creek	DRI	T 32		102.50	13.77	5837.	27.7
77	Truckee River above Donner Creek (left bank) Truckee River above Donner Creek near Truckee, CA	USGS	10338010	555.	102.12	14.15	5826.	27.8
78	Billy Mack Creek (Headwaters of Donner Creek)							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
79	Billy Mack Creek near Norden, CA	USGS	10338100	4.96			5940.	
80	Donner Creek above Donner Lake							
81	Negro Canyon Creek near Norden, CA	USGS	10338200	1.71			5940.	
82	Lakeview Canyon Creek near Norden, CA	USGS	10338300	1.75			5940.	
83	Donner Lake near Truckee			14.0				
84	Donner Creek at Donner Lake near Truckee	USGS CDWR	10338500 G7 1565.	14.3			5930.	
85	Donner Creek above Cold Creek							
86	Cold Creek							
87	Cold Creek at Irrigation Outlet	CDWR	G7 3833.1				6320.	
88	Cold Creek at Donner Creek near Truckee, CA	FWM	1				5910.	
89	Cold Creek at mouth							
90	Donner Creek below Cold Creek							
91	Highway 89 bridge							
92	Donner Creek below Highway 89 near Truckee, CA	CDWR	G7 1530.1				5840.	
93	Donner Creek near Truckee, CA	USGS CDWR	10339000 G7 1530.	29.2			5820.	
94	Donner Creek at West River Road	DRI	T 33				5820.	
95	Donner Creek at mouth near Truckee, CA California Water-Quality Objectives	USGS MCEE WQCP	10339003 I-4				5820.	
96	Truckee River below Donner Creek (left bank) California Water-Quality Objectives	WQCP			102.12	14.15	5826.	27.8
97	West of Truckee, CA	MCEE	R-3.5		101.99	14.28	5823.	27.7
98	River-touring take-out (left bank)				101.22	15.05	5801.	27.8
99	Altitude contour				101.20	15.07	5800.	27.8
100	Highway 267 bridge Truckee River at Highway 267 at Truckee, CA	USGS	10339010		100.86	15.41	5783.	28.3
101	Altitude contour				100.40	15.87	5760.	28.9
102	Truckee STP percolation ponds (right bank, discontinued)				99.85	16.42	5741.	29.1
103	Truckee River Upstream from STP Pilot Plant River-touring put-in, Class II-III, (left bank)	KE	S 4		99.84	16.43	5741.	29.1
104	Truckee River above Trout Creek (left bank)				99.83	16.44	5740.	29.1

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
105	Trout Creek							
106	Truckee Trout Creek T-1	UDRR	17				6520.	
107	Trout Creek Tributary at Zermatt Creek	UDRR	18				6460.	
108	Trout Creek before Golf Course	UDRR	20				6440.	
109	Trout Creek below Golf Course	UDRR	19				6400.	
110	Trout Creek below Tahoe-Donner Property Line	UDRR	22				6100.	
111	Trout Creek above I-80	UDRR	16				5860.	
112	Trout Creek at Truckee	CDWR	G7 1522.01				5840.	
113	Trout Creek at Mouth California Water-Quality Objectives	UDRR WQCP	21				5740.	
114	Truckee River below Trout Creek (left bank)				99.83	16.44	5740.	29.1
115	Altitude contour				99.24	17.03	5720.	29.3
116	Powerline crossing				98.45	17.82	5685.	30.0
117	Altitude contour				98.33	17.94	5680.	30.0
118	Tahoe-Truckee Sanitation Agency Sewage Treatment Plant							
119	Truckee River Flume Site near Polaris	MCEE	R-4		98.27	18.00	5679.	30.0
120	Truckee River above Martis Creek	DRI	T 34		96.93	19.33	5649.	29.5
121	Truckee River above Martis Creek (right bank)				96.60	19.67	5641.	29.4
122	Middle Martis Creek near Truckee, CA	USGS CDWR	10339200 G7 1505.	2.83			6220.	
123	Martis Creek at Highway 267 near Truckee, CA	USGS CDWR	10339250 G7 1500.01	25.8			5820.	
124	Martis Creek below Highway 267	DRI	T 177				5820.	
125	Martis Creek Lake near Truckee, CA	USGS	10339380	39.6			5740.	
126	Martis Creek below Martis Reservoir	DRI	T 12				5740.	
127	Martis Creek near Truckee, CA (new site)	USGS CDWR	10339400 G7 1490.	39.9			5740.	
128	Martis Creek near Truckee, CA (old site)	USGS	10339400	40.7				
129	Martis Creek near Mouth at Truckee, CA	USGS MCEE	10339405 S-4				5680.	
130	Martis Creek at Mouth California Water-Quality Objectives	MCEE WQCP	I-5				5680.	
131	Truckee River below Martis Creek (right bank) California Water-Quality Objectives	WQCP			96.60	19.67	5641.	29.4

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION AGENCY	HYDROLOGIC DATA COLLECTION AGENCY SITE NUMBER	DRAINAGE AREA (SQ MI)	RIVER MILES ABOVE MOUTH	RIVER MILES BELOW SOURCE	ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
132	Altitude contour				96.55	19.72	5640.	29.4
133	Truckee River above Old US 40 Bridge below Truckee, CA	USGS DRI MCEE	10339498 T 179 R-5		96.17	20.10	5629.	29.4
134	Old US 40 bridge				96.13	20.14	5628.	29.3
135	Altitude contour				95.15	21.12	5600.	29.3
136	Union Valley Creek (right bank)				94.70	21.57	5586.	29.3
137	I-80 bridge				93.92	22.35	5562.	29.4
138	Powerline crossing				93.90	22.37	5562.	29.4
139	Altitude contour				93.85	22.42	5560.	29.4
140	Truckee River above Prosser Creek (left bank)				93.72	22.55	5556.	29.4
141	South Fork Prosser Creek near Truckee, CA	USGS CDWR	10339500 G7 1430.	6.32			6520.	
142	Prosser Creek at Hobart Mills, CA	USGS CDWR	10339700 G7 1380.	27.60			5880.	
143	Prosser Creek	UDRR	8				5760.	
144	Prosser Creek above Alder Creek	CDWR	G7 1355.01				5680.	
145	Prosser Creek above Alder Creek							
146	Alder Creek Tributary at Slalom Way	UDRR	13				6730.	
147	Alder Creek below Ski Bowl at Slalom Way	UDRR	14				6730.	
148	Alder Creek above Tahoe-Donner .5 Miles above Slalom Way	UDRR	15				6680.	
149	Alder Creek Tributary below Equestrian Way	UDRR	10				6560.	
150	Alder Creek below Fjord Road	UDRR	12				6520.	
151	Alder Creek at Campground	UDRR	11				6300.	
152	Alder Creek near Truckee, CA	USGS CDWR	10339900 G7 1340.	7.33			5920.	
153	Alder Creek at Highway 89	FWM	2				5820.	
154	Alder Creek at Mouth near Truckee	CDWR	G7 1300.01				5840.	
155	Alder Creek at mouth							
156	Prosser Creek below Alder Creek							
157	Prosser Creek near Truckee, CA	USGS CDWR	10340000 G7 1295.	47.20			5680.	
158	Highway 89 near Truckee							
159	Prosser Creek at Highway 89	FWM	3				5760.	

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
160	Prosser Creek above Prosser Creek Reservoir	DRI	T 35				5760.	
161	Prosser Creek Reservoir near Boca, CA	USGS CDWR	10340300 G7 1272.	50.30			5660.	
162	Prosser Creek below Prosser Creek Dam near Truckee, CA (new)	USGS CDWR	10340500 G7 1260.	52.90			5670.	
163	Prosser Creek below Prosser Creek Dam near Truckee, CA (old)	USGS	10340500	53.30				
164	Prosser Creek at Mouth	MCEE DRI	I-6 T 36				5580.	
165	Truckee River below Prosser Creek (left bank)				93.72	22.55	5556.	29.4
166	I-80 bridge				93.20	23.07	5538.	29.5
167	Powerline crossing				93.10	23.17	5535.	29.5
168	Altitude contour				92.67	23.60	5520.	29.6
169	I-80 bridge Truckee River at I-80 above Little Truckee River near Truckee, CA	USGS	10340900		92.35	23.92	5509.	29.7
170	Truckee River above Little Truckee River	CDWR	G7 1254.01		91.60	24.67	5482.	29.9
171	Little Truckee River below Weber Lake near Truckee	USGS CDWR	10341000 G7 2635.	15.00			6760.	
172	Little Truckee River above Perazzo Creek							
173	Perrazo Creek at Perrazo Canyon Road	UDRR	3				6800.	
174	Little Truckee River below Perrazo Creek							
175	Little Truckee River above Coldstream Creek							
176	Coldstream Creek at Hennes Pass Road	UDRR	4				6560.	
177	Little Truckee River below Coldstream Creek							
178	Little Truckee River near Truckee, CA	USGS CDWR	10341500 G7 2550.	33.10			6480.	
179	Lower Little Truckee River North of Henness Pass Road	UDRR	2				6440.	
180	Little Truckee River below Sierra Valley Diversion	FWM	6				6400.	
181	Little Truckee River near Hobart Mills, CA	USGS CDWR	10342000 G7 2500.	37.10			6310.	
182	Little Truckee River at Independence Lake Road	FWM	7				6300.	
183	Sierra Valley Diversion at Highway 89	FWM	8				6400.	

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
184	Little Truckee River above Independence Lake California Water-Quality Objectives	WQCP						
185	Independence Lake near Dam	CDWR	G7 L 926.7 017.8				6960.	
186	Independence Lake, North Shore	CDWR	G7 L 927.0 017.9				6960.	
187	Independence Lake at Dam California Water-Quality Objectives	WQCP		7.51				
188	Independence Creek near Truckee, CA (old site)	USGS	10343000	7.63				
189	Independence Creek near Truckee, CA (new site)	USGS CDWR UDRR	10343000 G7 2380. 5	8.10			6940.	
190	Upper Independence Creek above Bridge	UDRR	6				6310.	
191	Independence Creek at mouth							
192	Little Truckee River below Independence Creek							
193	Little Truckee River above Stampede Reservoir at Highway 89	DRI FWM	T38 5				6160.	
194	Little Truckee River above Stampede Reservoir California Water-Quality Objectives	WQCP						
195	Stampede Reservoir							
196	Sagehen Creek							
197	Sagehen Creek near Truckee, CA	USGS CDWR	10343500 G7 2275.	10.50			6320.	
198	Sagehen Creek above Highway 89	UDRR	7				6140.	
199	Sagehen Creek at Highway 89	FWM DRI	4 . T 37				6140.	
200	Sagehen Creek at mouth							
201	Davies Creek							
202	Davies Creek above Merril Creek							
203	Merril Creek							
204	Merril Creek above Stampede Reservoir	DRI	T 112				5990.	
205	Merril Creek at mouth							
206	Davies Creek below Merril Creek							
207	Davies Creek above Stampede Reservoir	DRI	T 113				5990.	
208	Davies Creek at mouth							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
209	Stampede Reservoir near Boca, CA	USGS CDWR	10344300 G7 2220.	136.00			5680.	
210	Little Truckee River below Stampede Dam	CDWR	G7 2218.01				5800.	
211	Little Truckee River below Stampede Reservoir	FWM	9				5720.	
212	Little Truckee River above Boca Reservoir near Truckee California Water-Quality Objectives	USGS CDWR WQCP DRI	10344400 G7 2160. T 106	146.00			5640.	
213	Little Truckee River at Boca Reservoir	USGS	10344485				5640.	
214	Boca Reservoir							
215	Boca Reservoir near Truckee, CA	USGS CDWR	10344490 G7 2110.	172.00			5640.	
216	Little Truckee River below Boca Dam near Truckee	USGS DRI CDWR	10344500 T 39 G7 2100.05	173.00			5550.	
217	Little Truckee River at Mouth	MCEE	I-7				5540.	
218	Truckee River below Little Truckee River (left bank)				91.60	24.67	5482.	29.9
219	Altitude contour				91.55	24.72	5480.	29.9
220	River-touring take-out and put-in, Class II (right bank)				91.25	25.02	5472.	29.9
221	Boca Reservoir Road bridge Truckee River at Boca Bridge near Truckee, CA	 USGS MCEE KE CDWR	 10344505 R-6 S 5 G7 1252.01		91.24	25.03	5472.	29.8
222	I-80 bridge				90.90	25.37	5463.	29.8
223	Gravel pits (right bank)				90.75	25.52	5459.	29.8
224	Altitude contour				90.03	26.24	5440.	29.7
225	Old US 40 bridge Truckee River above Juniper Creek at Hirschdale	 DRI	 T 40		89.40	26.87	5427.	29.5
226	Truckee River above Juniper Creek (right bank)				89.10	27.17	5421.	29.4
227	Juniper Creek							
228	Juniper Creek at Hirschdale Road	CDWR UDRR	G7 1235.01 64				5460.	
229	Juniper Creek at mouth							
230	Truckee River below Juniper Creek (right bank)				89.10	27.17	5421.	29.4
231	Truckee River near Hirschdale Dump	USGS	10344992		88.35	27.92	5406.	29.1

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
232	Truckee River below Hirsohdale Dump	USGS	10344993		88.29	27.98	5405.	29.1
233	Altitude contour				88.05	28.22	5400.	29.0
234	Casey Canyon Creek (right bank)				87.06	29.21	5381.	28.7
235	Truckee River at Iceland				86.70	29.57	5374.	28.6
236	Southern Pacific Railroad bridge Truckee River above Gray Creek (right bank)				86.50	29.77	5370.	28.5
237	Gray Creek							
238	Gray Creek above Mouth at Hirschdale Road	NDEP UDRR	N310053 65				5430.	
239	Gray Creek at mouth							
240	Truckee River below Gray Creek (right bank)				86.50	29.77	5370.	28.5
241	Altitude contour Truckee River at Iceland				86.00	30.27	5360.	28.4
242	Truckee River above Bronco Creek (right bank)				85.35	30.92	5334.	28.6
243	Bronco Creek above Mouth at Hirschdale Road	NDEP UDRR	N310052 66				5360.	
244	Bronco Creek at mouth							
245	Truckee River below Bronco Creek (right bank)				85.35	30.92	5334.	28.6
246	Truckee River at Iceland				85.30	30.97	5332.	28.6
247	River-touring take-out for Class II reach (left bank). Start of Class III-IV rapids.				85.10	31.17	5324.	28.7
248	Altitude contour				85.00	31.27	5320.	28.7
249	Altitude contour				84.60	31.67	5280.	29.6
250	End of Class III-IV rapids				84.54	31.73	5275.	29.8
251	Truckee River at Floriston, CA (old gage)	USGS	10345900		84.30	31.77	5272.	29.8
252	Floriston bridge				84.48	31.79	5270.	29.9
253	I-80 bridge (Floriston exit)				84.44	31.83	5267.	29.9
254	River-touring take-out (right bank)				84.35	31.92	5260.	30.0
255	Truckee River at Floriston Dam	USGS	10345909		84.31	31.96	5257.	30.1
256	Dam Floriston (Farad power) diversion (left bank)				84.30	31.97	5256.	30.1
257	Altitude contour				84.10	32.17	5240.	30.4
258	I-80 bridge				83.75	32052	5223.	30.6

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
259	Altitude contour				83.30	32.97	5200.	30.9
260	Farad power house return California Water-Quality Objectives Nevada Water-Quality Standard	 WQCP WQCP			82.50	33.77	5168.	31.1
261	Truckee River at Farad, CA	DRI NDEP CDWR	T 42 N310000 G7 1195.		82.42	33.85	5165.	31.1
262	River-touring put-in, Class III (left bank)				82.40	33.87	5164.	31.1
263	Altitude contour				82.30	33.97	5160.	31.2
264	Truckee River at Farad, CA	USGS MCEE KE	10346000 R-7 S 6	932.56	81.89	34.38	5147.	31.2
265	Mystic Canyon Creek (right bank)				81.30	34.97	5129.	31.2
266	Farad dye sampling, 1980				81.28	34.99	5129.	31.2
267	Farad dye sampling, 1979				81.09	35.18	5123.	31.2
268	Altitude contour				81.00	35.27	5120.	31.2
269	Southern Pacific Railroad Bridge				80.10	36.17	5096.	31.0
270	Puny Dip Canyon Creek (right bank)				79.80	36.47	5088.	31.0
271	Altitude contour				79.50	36.77	5080.	31.0
272	Dam Fleish power diversion (right bank)				79.08	37.19	5063.	31.1
273	Deep Canyon Creek (right bank)				78.75	37.52	5050.	31.2
274	Altitude contour				78.50	37.77	5040.	31.2
275	California/Nevada state line				78.05	38.22	5014.	31.5
276	Truckee River at USS Steamboat diversion dam				78.01	38.26	5012.	31.5
277	Steamboat Ditch Diversion (right bank)	USGS	10346556		78.00	38.27	5011.	31.6
278	Altitude contour				77.80	38.47	5000.	31.7
279	Unnamed tributary (left bank)				77.50	38.77	4982.	31.9
280	Altitude contour				77.12	39.15	4960.	32.2
281	Fleish power house return (right bank)				76.75	39.52	4938.	32.4
282	Southern Pacific Railroad Bridge				76.70	39.57	4935.	32.4
283	Rapids, Class IV				76.69	39.58	4934.	32.5
284	Footbridge				76.67	39.60	4933.	32.5
285	Fuller Lake outlet (right bank)				76.60	39.67	4929.	32.5
286	Altitude contour				76.45	39.82	4920.	32.6
287	Coldron Ditch Diversion (left bank) Verdi power diversion (right bank)	FWM	11		75.88	40.39	4900.	32.7

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
288	Truckee River near Essex, NV	USGS CDWR	10347000 G7 1150.		75.31	40.96	4880.	32.7
289	Altitude contour				75.30	40.97	4880.	32.7
290	Altitude contour				74.97	41.30	4870.	32.7
291	I-80 bridge				74.87	41.40	4867.	32.7
292	River-touring take-out and put-in, Class II-III				74.32	41.95	4853.	32.6
293	Crystal Peak Fish Population Site	UFWS						
294	Old US40 bridge Truckee River at Crystal Peak Park at Verdi, NV	 USGS PEL	 10347050 TU01		74.30	41.97	4852.	32.6
295	Altitude contour State fish hatchery (left bank)				73.85	42.42	4840.	32.5
296	Truckee River above Dog Creek (left bank)				73.53	42.74	4832.	32.5
297	Dog Creek near Verdi, NV	USGS CDWR	10347300 G7 1145.	16.20			5720.	
298	Dog Creek at mouth							
299	Truckee River below Dog Creek (left bank)				73.53	42.74	4832.	32.5
300	Bridge Street bridge Truckee River at Bridge Street bridge at Verdi, NV	 USGS	 10347320		73.50	42.77	4831.	32.5
301	Donner Trail Fish Population Site	UFWS						
302	Altitude contour				73.05	43.22	4820.	32.4
303	Powerline crossing				72.62	43.65	4809.	32.3
304	Truckee River above Verdi power return (right bank)				72.50	43.77	4805.	32.3
305	Verdi power diversion from Truckee River							
306	Katz Ditch near Verdi, NV	USGS FWM	10347331 13				4900.	
307	Verdi power diversion at mouth							
308	Truckee River below Verdi power return (right bank)				72.50	43.77	4805.	32.3
309	Powerline crossing Bull Ranch Creek (left bank)				72.45	43.82	4804.	32.3
310	Altitude contour Vikins Metals Storm Drain from Ponds, Verdi, NV	 USGS	 10347333		72.30	43.97	4800.	32.3
311	Old US40 bridge below Verdi Truckee River below Vikins Plant Thermograph	 USGS	 10347335		72.20	44.07	4798.	32.2

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
312	Truckee River near Verdi Truckee River Intersravel near Verdi Egg site	USGS USGS	10347336 10347337		72.00	44.27	4794.	32.2
313	Truckee River at Glen Meadows Trailer Park near Verdi, NV	USGS	10347339		71.58	44.49	4790.	32.1
314	Altitude contour Washoe Power diversion (right bank)				71.24	45.03	4780.	32.0
315	Truckee River above Coldron Ditch return (left bank)				71.16	45.11	4776.	32.0
316	Coldron Ditch diversion from Truckee River							
317	Coldron Ditch at Verdi, NV	USGS FWM	10347390 12				4960.	
318	Coldron Ditch at mouth							
319	Truckee River below Coldron Ditch return (left bank)				71.16	45.11	4776.	32.0
320	River Bend Fish Population Survey	UFWS			71.10	45.17	4773.	32.0
321	Truckee River near US40 below Verdi	DRI	T 57		71.09	45.18	4773.	32.0
322	Road bridge				71.00	45.27	4768.	32.1
323	Highland Ditch Diversion (left bank)				70.95	45.32	4766.	32.1
324	Highland Ditch at Reno, NV	USGS FWM	10347420 14				4740.	
325	Southern Pacific Railroad Bridge				70.90	45.37	4763.	32.1
326	Altitude contour				70.84	45.43	4760.	32.1
327	Southern Pacific Railroad Bridge				70.80	45.47	4759.	32.1
328	Altitude contour				70.28	45.99	4740.	32.2
329	I-80 bridge				70.05	46.22	4732.	31.9
330	Altitude contour				69.70	46.57	4720.	32.2
331	Altitude contour				69.30	46.97	4700.	32.3
332	Unnamed tributary (right bank)				69.20	47.07	4697.	32.3
333	Washoe Powerhouse return (right bank)				68.90	47.37	4687.	32.3
334	Powerline crossings (2)				68.85	47.42	4685.	32.3
335	Washoe Powerhouse bridge				68.74	47.53	4681.	32.4
336	Altitude contour				68.70	47.57	4680.	32.4
337	Unnamed tributary (right bank)				68.65	47.62	4678.	32.4
338	Altitude contour				68.20	48.07	4660.	32.4
339	Last Chance Ditch Diversion (right bank)				68.00	48.27	4656.	32.4
340	Altitude contour				67.15	49.12	4640.	32.1

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
341	Circle D Ranch bridge Truckee River at Laushtons, NV (old gage) Truckee River at Circle D Ranch Bridge	USGS CDWR NDEP DRI	10347500 G7 1143. N310092 T 181		66.75	49.52	4633.	32.0
342	Altitude contour				66.03	50.24	4620.	31.8
343	Truckee River above Hunter Creek (right bank)				65.88	50.39	4616.	31.8
344	Hunter Creek near Reno, NV	USGS	10347600	11.5P			5040.	
345	Sierra Pacific Power Company diversion to Hunter Creek Reservoir							
346	Steamboat Ditch flume							
347	Hunter Creek into Sierra Pacific Power Company Diversion near Reno, NV	USGS FWM	10347610 55				5000.	
348	Hunter Creek below Sierra Pacific Power Company Diversion near Reno, NV	USGS FWM	10347620 56				4680.	
349	Last Chance Ditch flume							
350	Hunter Creek at Mouth near Reno, NV	USGS	10347650				4660.	
351	Hunter Creek at mouth							
352	Truckee River below Hunter Creek (right bank) Old Mayberry Bridge Site Lake Ditch diversion (right bank)	KE MCEE	S 7 R-8		65.88	50.39	4616.	31.8
353	Truckee River at Mayberry Drive below Lawton, NV	USGS	10347690		65.70	50.57	4611.	31.8
354	Altitude contour				65.30	50.97	4600.	31.8
355	Southside Ditch diversion (right bank)				64.88	51.39	4588.	31.7
356	Orr Ditch diversion (left bank)				64.70	51.57	4583.	31.7
357	Altitude contour				64.60	51.67	4580.	31.7
358	Altitude contour				64.20	52.07	4570.	31.7
359	Altitude contour				63.82	52.45	4560.	31.6
360	Alum Creek				63.60	52.67	4555.	31.6
361	Truckee River above last Southside Ditch return (right bank)				63.51	52.76	4552.	31.6
362	Southside Ditch diversion from Truckee River							
363	Southside Ditch near Reno, NV	USGS FWM	10347695 17				4600.	
364	Southside Ditch return at mouth							
365	Truckee River below last Southside Ditch return (right bank)				63.51	52.76	4552.	31.6

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
366	Altitude contour				63.42	52.85	4550.	31.6
367	Dam at Ivan Sack Park				63.11	53.16	4543.	31.5
368	Altitude contour				62.95	53.32	4540.	31.5
369	Altitude contour				62.75	53.52	4530.	31.6
370	Altitude contour				62.40	53.87	4520.	31.5
371	Altitude contour				61.90	54.37	4510.	31.4
372	Idlewild Park at Reno				61.75	54.52	4506.	31.4
373	Truckee River at Idlewild Park	DRI HEW NDEP	T 44 1 N310001		61.74	54.53	4505.	31.4
374	Truckee River above Sierra Pacific Power Company Idlewild Intake at Reno, NV	USGS	10347710		61.71	54.56	4504.	31.4
375	Sierra Pacific Power Company Idlewild public-supply diversion Nevada Water-Quality Standard (right bank above Booth Street bridge)	WQCP			61.70	54.57	4504.	31.4
376	Booth Street (Sharon Way) bridge				61.60	54.67	4501.	31.4
377	Altitude contour				61.56	54.71	4500.	31.4
378	Keystone Avenue bridge				61.46	54.81	4497.	31.4
379	Truckee River above Peavine Creek (Historical drainage)				61.00	55.27	4485.	31.4
380	Peavine Creek near Reno, NV	USGS	10347800	2.34			4940.	
381	Truckee River below Peavine Creek				61.00	55.27	4485.	31.4
382	Truckee River in Wingfield Park at Reno, NV Diversion dams at Arlington (Wingfield Park)	USGS	10347861		60.94	55.33	4484.	31.4
383	Old Sullivan and Kelly Ditch Diversion (left bank)				60.91	55.36	4483.	31.4
384	Arlington Avenue bridge				60.90	55.37	4483.	31.4
385	Altitude contour				60.80	55.47	4480.	31.4
386	Cochran Ditch diversion (right bank above Sierra Street)				60.77	55.50	4479.	31.4
387	Virginia Street bridge				60.69	55.58	4478.	31.3
388	Road bridge				60.62	55.65	4477.	31.3
389	Lake Street bridge				60.55	55.72	4475.	31.3
390	Second Street bridge				60.35	55.92	4471.	31.3
391	Kuenzli Street bridge				60.30	55.97	4470.	31.2
392	Altitude contour				60.28	55.99	4470.	31.2

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
393	Wells Avenue bridge				60.07	56.20	4464.	31.2
394	Altitude contour				59.95	56.32	4460.	31.2
395	Gravel pits (left bank)				59.80	56.47	4455.	31.2
396	Altitude contour				59.67	56.60	4450.	31.3
397	Altitude contour				59.32	56.95	4440.	31.2
398	Kietzke Avenue bridge				59.20	57.07	4439.	31.2
399	Highway 395 Expressway bridge				59.10	57.17	4438.	31.1
400	Truckee River at Reno, NV	USGS CDWR DRI	10348000 G7 1142. T 79	1067.	59.07	57.20	4438.	31.1
401	Sullivan and Kelly pump diversion (left bank)				58.77	57.50	4436.	31.0
402	Eastman Ditch diversion (right bank) North Truckee Ditch diversion (left bank) Sessions Ditch diversion (left bank)				58.61	57.66	4435.	30.9
403	Sierra Pacific Power Company Glendale public-supply diversion (left bank)							
404	Sierra Pacific Power Company Glendale Diversion near Sparks, NV	USGS FWM	10348034 24				4430.	
405	Eastman, North Truckee, Sessions diversion dam				58.61	57.66	4435.	30.9
406	Altitude contour				58.60	57.67	4430.	31.0
407	Glendale Avenue bridge Truckee River at Glendale Avenue near Sparks, NV Old Reno sewage treatment plant and outfall (discontinued)	USGS HEW	10348036 2		55.85	57.72	4430.	31.0
408	Altitude contour Diversion Dam Sessions Ditch diversion (left bank) Pioneer Ditch diversion (right bank)				58.05	58.22	4420.	30.9
409	Glendale Ditch diversion dam Glendale Ditch diversion (left bank) below dam Altitude contour				57.66	58.61	4415. 4410. 4410.	30.8
410	South Rock Boulevard bridge				57.32	58.95	4405.	30.8
411	Truckee River above last Sessions Ditch return (left bank)				57.31	58.96	4405.	30.8
412	Sessions Ditch diversion from Truckee River							
413	Sessions Ditch near Reno, NV	USGS FWM	10348150 23				4430.	
414	Sessions Ditch return at mouth							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
415	Truckee River below last Sessions Ditch return (left bank)				57.31	58.96	4405.	30.8
416	Altitude contour				57.00	59.27	4400.	30.7
417	Altitude contour				56.30	59.97	4390.	30.5
418	Truckee River near Sparks, NV	USGS	10348200		56.16	60.11	4387.	30.5
419	McCarran Boulevard/Boynton Lane bridge Truckee River at Boynton Lane Bridge Nevada Water-Quality Standard	KE WQCP MCEE DRI NDEP	S 8 R-9A T 46 N310002		56.12	60.15	4387.	30.5
420	Storm Drain outfall (left bank) Cross section A1				55.75	60.52	4380.	30.4
421	Truckee River Intrasravel near Sparks, NV	USGS	10348201		55.58	60.69	4380.	30.3
422	Storm drain outfall (left bank)				54.97	61.30	4380.	30.0
423	Cross section A2				54085	61.43	4375.	30.0
424	0.9 Kilometers above Reno-Sparks Joint Water Pollution Control Plant	LE	TR-3		54.14	62.13	4372.	29.7
425	Cross section A3				54.01	62.26	4372.	29.7
426	Truckee River above North Truckee Drain (left bank)				53.67	62.60	4371.	29.5
427	North Truckee Drain System							
428	Orr Ditch diversion from Truckee River							
429	Orr Ditch near Reno, NV	USGS FWM	10348210 18				4560.	
430	Orr Ditch above Spanish Springs Valley near Sparks, NV	USGS	10348215				4480.	
431	Orr Ditch to Spanish Springs Valley near Sparks, NV	USGS FWM	10348220 27				4500.	
432	Orr Ditch Siphon diversion							
433	North Truckee Drain at Spanish Springs Valley Road near Sparks, NV	USGS	10348245				4420.	
434	North Truckee Drain below Spanish Springs Valley near Sparks, NV	USGS FWM	10348250 28				4420. 4420.	
435	Orr Ditch siphon crossing							
436	North Truckee Drain above North Truckee Ditch							
437	North Truckee Ditch diversion from Truckee River							
438	North Truckee Ditch at Sparks, NV	USGS FWM	10348270 21				4500.	
439	North Truckee Ditch above Sullivan and Kelly Ditch							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
440	Sullivan and Kelly Ditch pump diversion from Truckee River							
441	Sullivan and Kelly Ditch at Sparks, NV	USGS	10348275				4440.	
442	Sullivan and Kelly return at mouth							
443	North Truckee Ditch below Sullivan and Kelly Ditch							
444	North Truckee Ditch at mouth							
445	North Truckee Drain below North Truckee Ditch							
446	Orr Ditch Siphon near Sparks, NV	USGS FWM	10348290 74				4470.	
447	North Truckee Drain at Kleppe Lane near Sparks, NV	USGS FWM DRI	10348300 29 T 64	7.95			4375.	
448	North Truckee Drain above Glendale ditch							
449	Glendale Ditch diversion from Truckee River							
450	Glendale Ditch at Sparks, NV	USGS FWM	10348310 26				4410.	
451	Glendale Ditch at mouth							
452	North Truckee Drain below Glendale ditch							
453	North Truckee Drain at mouth			107.95				
454	Truckee River below North Truckee Drain (left bank)				53.67	62.60	4371.	29.5
455	Truckee River above Steamboat Creek	PEL	TU02		53.38	62.69	4371.	29.5
456	Truckee River above Steamboat Creek (right bank)				53.53	62.74	4371.	29.4
457	Franktown Creek (Headwaters of Steamboat Creek)							
458	Franktown Creek near Carson City, NV	USGS	10348460	3.24			7360.	
459	Franktown Creek at Franktown, NV	USGS CDWR	10348500 G7 1141.	14.P			5190.	
460	Highway 395 bridge Franktown Creek at Old Highway 395	UDRR	70				5060.	
461	Franktown Creek at Washoe Lake							
462	Washoe Lake near Carson City, NV	USGS	10348700	83.96			5030.	
463	Little Washoe Lake near Steamboat, NV	USGS	10348800	83.8P			5030.	
464	Highway 395 bridge							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
465	Steamboat Creek (Little Washoe Lake outlet) at Washoe City, NV	USGS FWM	10348805 32	83.96			5030.	
466	Hidden Lake							
467	Browns Creek							
468	Highway 395 bridge							
469	Steamboat Creek above Smith Ditch return (left bank)							
470	Smith Ditch diversion from Galena Creek							
471	Smith Ditch near Steamboat , NV	USGS FWM	10348825 37				4900.	
472	Smith Ditch at mouth							
473	Steamboat Creek below Smith Ditch return (left bank)							
474	Steamboat Creek above last Lower Sauer return (left bank)							
475	Lower Sauer Ditch diversion from Galena Creek							
476	Lower Sauer Ditch near Steamboat, NV	USGS FWM	10348828 40				4880.	
477	Lower Sauer Ditch return at mouth							
478	Steamboat Creek below last Lower Sauer Ditch return (left bank)							
479	Steamboat Creek above Galena Creek							
480	Galena Creek at Highway 27 near Washoe City, NV	UDRR	69				6240.	
481	Crutchfield diversion (left bank)							
482	Galena Creek near Steamboat, NV	USGS FWM	10348900 34	8.5P			5600.	
483	North Callahan Ditch diversion (left bank)							
484	South Callahan Ditch diversion (right bank)							
485	Galena Creek above Jones Creek							
486	Jones Creek							
487	Jones Creek above last Crutchfield Ditch return							
488	Crutchfield Ditch diversion from Galena Creek							
489	Crutchfield Ditch near Steamboat NV	USGS FWM	10348930 33				5960.	

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
490	Last Crutchfield Ditch return at mouth							
491	Jones Creek below last Crutchfield Ditch return							
492	Jones Creek above last North Callahan Ditch return							
493	North Callahan Ditch diversion from Galena Creek							
494	North Callahan Ditch near Steamboat, NV	USGS FWM	10348950 35				5520.	
495	Last North Callahan Ditch return at mouth							
496	Jones Creek below last North Callahan Ditch return							
497	Jones Creek at mouth							
498	Galena Creek below Jones Creek							
499	Galena Creek above last South Callahan Ditch return (right bank)							
500	South Callahan Ditch diversion from Galena Creek							
501	South Callahan Ditch near Steamboat, NV	USGS FWM	10348970 36				5520.	
502	South Callahan Ditch return at mouth							
503	Galena Creek below last South Callahan Ditch return (right bank)							
504	Galena Creek near Washoe City, NV	USGS FWM	10348990 38				4920.	
505	Smith Ditch diversion (right bank)							
506	Upper Sauer Ditch diversion (right bank)							
507	Lower Sauer Ditch diversion (right bank)							
508	Galena Creek near Washoe, NV	USGS CDWR	10349000 G7 1140.	18.8			4840.	
509	Highway 395 bridge							
510	Galena Creek at mouth							
511	Steamboat Creek below Galena Creek							
512	Steamboat Creek above last Upper Sauer Ditch return (left bank)							
513	Upper Sauer Ditch diversion from Galena Creek							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
514	Upper Sauer Ditch near Steamboat, NV	USGS FWM	10349010 39				4870.	
515	Upper Sauer Ditch return at mouth							
516	Steamboat Creek below last Upper Sauer Ditch return (left bank)							
517	Steamboat Creek near Steamboat, NV	USGS FWM	10349100 41				4680.	
518	Big Ditch diversion (right bank)							
519	Hughes and Cameron diversion (left bank)							
520	Hansen Ditch diversion (right bank)							
521	Rhodes Road bridge							
522	Steamboat Creek above Hansen Ditch return (right bank)							
523	Hansen Ditch diversion from Steamboat Creek							
524	Hansen Ditch near Steamboat, NV	USGS FWM	10349150 44				4650.	
525	Hansen Ditch return at mouth							
526	Steamboat Creek below Hansen Ditch return (right bank)							
527	Steamboat Creek above Big Ditch return (right bank)							
528	Big Ditch diversion from Steamboat Creek							
529	Big Ditch near Steamboat, NV	USGS FWM	10349210 42				4680.	
530	Big Ditch at mouth							
531	Steamboat Creek below Big Ditch return (right bank)							
532	Steamboat Creek above Hughes and Cameron Ditch return (left bank)							
533	Hughes and Cameron Ditch diversion from Steamboat Creek							
534	Hughes and Cameron Ditch near Steamboat, NV	USGS FWM	10349290 43				4640.	
535	Hughes and Cameron Ditch at mouth							
536	Steamboat Creek below Hughes and Cameron Ditch return (left bank)							
537	Steamboat Creek at Steamboat, NV	USGS CDWR	10349300 G7 1138.	122.74			4600.	
538	Steamboat Creek above Steamboat Ditch return							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
539	Steamboat Ditch diversion from Truckee River							
540	Fleish power penstock crossing							
541	Fuller Lake outlet crossing							
542	Steamboat Ditch near Floriston, CA	USGS FWM	10349350 10				5000.	
543	Hunter Creek crossing							
544	Hunter Creek diversion ditch crossing							
545	Alum Creek crossing							
546	Evans Creek crossing							
547	Dry Creek crossing							
548	Thomas Creek crossing							
549	Howards Ditch crossing							
550	Browns Ditch crossing							
551	Whites Creek crossing							
552	Steamboat Ditch near Steamboat, NV	USGS FWM	10349380 47				4740.	
553	Highway 395 bridge							
554	Steamboat Ditch at mouth							
555	Steamboat Creek below Steamboat Ditch return							
556	Steamboat Creek below Steamboat Ditch at Steamboat, NV	USGS	10349490				4600.	
557	Steamboat Creek at Steamboat Springs, NV	USGS	10349500				4600.	
558	Steamboat Hot Springs							
559	Chandler Ditch diversion (right bank)							
560	Crane-Clow Ditch diversion (right bank)							
561	Highway 17 bridge							
562	Steamboat Creek at Highway 17 near Steamboat, NV	PEL	SU01				4500.	
563	Steamboat Creek above Brown Ditch return							
564	Brown Ditch diversion from Whites Creek							
565	Brown Ditch near Steamboat, NV	USGS FWM	10349580 50				4960.	

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
566	Highway 395 bridge							
567	Brown Ditch at mouth							
568	Steamboat Creek below Brown Ditch return							
569	Steamboat Creek above Crane-Clow Ditch return							
570	Crane-Clow Ditch diversion from Steamboat Creek							
571	Crane-Clow Ditch near Steamboat, NV	USGS FWM	10349650 45				4570.	
572	Crane-Clow Ditch above Whites Creek							
573	Whites Creek							
574	Whites Creek near Steamboat, NV	USGS	10349700	8.02			5990.	
575	Whites Creek above Thomas Creek Road	UDRR	68	8.01			5960.	
576	Whites Creek Main Channel near Steamboat, NV	USGS FWM	10349720 49				5360.	
577	Howards and Browns Ditch diversion							
578	Highway 395 bridge							
579	Whites Creek at mouth							
580	Crane-Clow Ditch below Whites Creek							
581	Crane-Clow Ditch at mouth							
582	Steamboat Creek below Crane-Clow Ditch return							
583	Steamboat Creek above Howards ditch return							
584	Howards Ditch diversion from Whites Creek							
585	Howards Ditch near Steamboat, NV	USGS FWM	10349730 51				5010.	
586	Howards Ditch above Last Chance Ditch							
587	Last Chance Ditch diversion from Truckee River							
588	Hunters Creek crossing							
589	Last Chance Ditch at Hunters Creek Creek near Reno, NV	USGS FWM	10349740 15				4660.	
590	Alum Creek crossing							
591	Last Chance Ditch above Evans Creek							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
592	Evans Creek above Agricultural Diversion near Reno, NV	USGS FWM	10349755 54				5290.	
593	Evans Creek at mouth							
594	Last Chance Ditch below Evans Creek							
595	Dry Creek crossing							
596	Thomas Creek crossing							
597	Last Chance Ditch at mouth							
598	Howards Ditch below Last Chance Ditch return							
599	Howards Ditch above Highway 395 near Reno, NV	USGS FWM	10349765 52				4530.	
600	Highway 395 bridge							
601	Howards Ditch at mouth							
602	Steamboat Creek below Howards Ditch return							
603	Steamboat Creek above Chandler Ditch return							
604	Chandler Ditch diversion from Steamboat Creek							
605	Chandler Ditch at Highway 17 near Steamboat, NV	USGS FWM	10349780 46				4580.	
606	Chandler Ditch at mouth							
607	Steamboat Creek below Chandler Ditch return							
608	Short Lane bridge							
609	Steamboat Creek above Lake Ditch return							
610	Lake Ditch diversion from Truckee River							
611	Lake Ditch at Mayberry Drive near Reno, NV	USGS FWM	10349810 16				4600.	
612	Dry Creek crossing							
613	Lake Ditch above Thomas Creek							
614	Thomas Creek							
615	Thomas Creek above Thomas Creek Road near Washoe City, NV	UDRR	67	7.32			6000.	
616	Thomas Creek above Steamboat Ditch near Reno, NV	USGS FWM	10349830 53				4790.	
617	Thomas Creek at mouth							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
618	Lake Ditch below Thomas Creek Highway 395 bridge							
619	Huffaker Hills reservoir							
620	Short Lane bridge							
621	Lake Ditch at mouth							
622	Steamboat Creek below Lake Ditch Return							
623	Steamboat Creek at Bellevista Ranch near Sparks, NV	USGS FWM	10349850 48				4830.	
624	Unnamed Ditch return below Short Lane (right bank)							
625	Steamboat Creek above Boynton Slough							
626	Boynton Slough							
627	Evans Creek storm drainage							
628	Boynton Slough above Boynton Lane near Reno, NV	USGS	10349880				4390.	
629	Ditch return to Boynton Slough (left bank)							
630	Boynton Lane bridge							
631	Boynton Slough above Dry Creek							
632	Dry Creek							
633	Dry Creek at Huffaker Lane near Reno, NV	USGS	10349920				4470.	
634	Highway 395 bridge							
635	Dry Creek above Cochran Ditch return							
636	Cochran Ditch diversion from Truckee River							
637	Cochran Ditch at Reno, NV	USGS FWM	10349938 19				4470.	
638	Virginia Lake							
639	Cochran Ditch (Virginia Lake outlet) at Reno, NV	USGS FWM	10349940 72				4455.	
640	Highway 395 bridge							
641	Cochran Ditch at mouth							
642	Dry Creek below Cochran Ditch return							
643	East Peckham Lane bridge							
644	Dry Creek at Boynton Slough near Reno, NV	USGS	10349960				4390.	

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
645	Dry Creek at mouth							
646	Boynton Slough below Dry Creek							
647	Boynton Slough at mouth							
648	Steamboat Creek below Boynton Slough							
649	Steamboat Creek above Yori Drain							
650	Yori Drain							
651	Yori Drain above Steamboat Creek near Sparks, NV	USGS FWM	10349970 73				4380.	
652	Yori Drain at mouth							
653	Steamboat Creek below Yori Drain							
654	Steamboat Creek above Pioneer Ditch							
655	Pioneer Ditch diversion from Truckee River							
656	Pioneer Ditch at Reno, NV	USGS FWM	10349971 25				4410.	
657	Pioneer Ditch above last Eastman Ditch return							
658	Eastman Ditch diversion from Truckee River							
659	Eastman Ditch at Reno, NV	USGS FWM	10349974 22				4430.	
660	Eastman Ditch return at mouth							
661	Pioneer Ditch below last Eastman Ditch return							
662	McCarran Boulevard bridge							
663	Pioneer Ditch at University Farms near Reno, NV	USGS	10349975				4380.	
664	Pioneer Ditch #2 diversion (left bank)							
665	Pioneer Ditch at Jones Ranch near Sparks, NV	USGS FWM	10349979 31				4380.	
666	Pioneer Ditch at mouth							
667	Steamboat Creek below Pioneer Ditch							
668	Steamboat Creek at Kimlick Lane near Reno, NV	USGS DRI FWM PEL	10349980 T 47 30 SU02				4375.	
669	Steamboat Creek above Pioneer Ditch #2 return							
670	Pioneer Ditch #2 diversion from Pioneer Ditch							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE
		AGENCY	AGENCY SITE NUMBER	(SQ MI)	ABOVE MOUTH	BELOW SOURCE		(FT/MI)
671	Pioneer Ditch Return #2 below Kimlick Lane near Reno, NV	USGS	10349986				4380.	
672	Steamboat Creek below Pioneer Ditch #2 Return							
673	Steamboat Creek above Reno-Sparks Sewage Treatment Plant Outfall	MCEE	S5				4380.	
674	Reno-Sparks Sewage Treatment Plant Outfall near Reno, NV	USGS DRI PEL	10349989 T 95 E001				4380.	
675	Steamboat Creek below Reno-Sparks Sewage Treatment Plant outfall							
676	Steamboat Creek at Footbridge	PEL	SD01				4380.	
677	Steamboat Creek above Mouth	MCEE DRI	I-8 T 183				4380.	
678	Steamboat Creek at mouth Nevada Water-Quality Standard	WQCP		245.70				
679	Truckee River below Steamboat Creek (right bank)				53.53	62.74	4371.	29.4
680	Truckee River below Steamboat Creek	PEL	TD01		53.51	62.76	4371.	29.4
681	Truckee River below Steamboat Creek ("First Riffle")	PEL	TD02		53.28	62.99	4370.	29.4
682	Truckee River at Casci Ranch	HEW	4					
683	Truckee River 1/2 Mile below Sewage Treatment Plant	RS	3					
684	Truckee River at Sparks Drain (drain abandoned)	HEW	SD		52.86	63.41	4369.	29.2
685	Truckee River at Southern Pacific Railroad Bridge below Steamboat Creek	PEL	TD03		52.36	63.91	4368.	29.0
686	Truckee River at Vista, NV	USGS CDWR	10350000 G7 1135.	1431.35	52.23	64.04	4368.	28.9
687	Truckee River at Vista Rest Stop	DRI NDEP	T 59 N310006		51.67	64.60	4366.	28.7
688	Largomarsino-Noce diversion (left bank)				51.25	65.02	4365.	28.5
689	Southern Pacific Railroad Bridge				51.18	65.09	4365.	28.5
690	Diversion Dam Largomarsino-Murphy diversion (right bank) below dam				51.10	65.17	4365. 4360.	28.4
691	Truckee River above Largomarsino-Noce return (left bank)				50.45	65.82	4351.	28.4
692	Largomarsino-Noce diversion from Truckee River							
693	Largomarsino-Noce Ditch near Vista, NV	USGS FWM	10350048 57				4390.	

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
694	Larsomarsino-Noce return at mouth							
695	Truckee River below Larsomarsino-Noce return (left bank)				50.45	65.82	4351.	28.4
696	Cross Section A4				50.11	66.16	4346.	28.3
697	Larsomarsino-Murphy point return				50.06	66.21	4345.	28.3
698	Larsomarsino bridge Truckee River at Lockwood, NV Nevada Water-Quality Standard	USGS WQCP HEW PEL NDEP MCEE	10350050 5 TD04 N310003 R-9		50.05	66.22	4345.	28.3
699	Groton Diversion to South Side Winsfall with Gate	USGS	10350057		49.90	66.37	4343.	28.3
700	Lockwood Thermograph site (left bank)				49.88	66.39	4342.	28.3
701	Truckee River above Long Valley Creek (right bank)				49.77	66.50	4341.	28.3
702	Long Valley Creek near Happy Valley	USGS	10350100	82.6P			4540.	
703	Long Valley Creek at mouth							
704	Truckee River below Long Valley Creek (right bank)				49.77	66.50	4341.	28.3
705	Sheep Ranch diversion (left bank)				49.70	66.57	4339.	28.2
706	Truckee River above Groton Ditch return (right bank)				48.98	67.29	4328.	28.1
707	Groton Ditch diversion from Truckee River							
708	Groton Ditch at Lookwood, NV	USGS FWM	10350130 59				4340.	
709	Groton Ditch return at mouth							
710	Truckee River below Groton Ditch return (right bank)				48.98	67.29	4328.	28.1
711	Larsomarsino-Murphy Ditch point return				48.59	67.68	4322.	28.0
712	Truckee River at upper bridge near Mustang, NV				48.25	68.02	4316.	28.0
713	Cross Section A5				48.22	68.05	4316.	30.0
714	Truckee River at lower Mustang Ranch bridge				47.90	68.37	4315.	27.9
715	Altitude contour				47.67	68.60	4314.	27.8
716	Truckee River above Sheep Ranch Ditch return (left bank)				47.65	68.62	4314.	27.8
717	Sheep Ranch Ditch diversion from Truckee River							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
718	Sheep Ranch Ditch near Lockwood, NV	USGS FWM	10350140 60				4330.	
719	Sheep Ranch return at mouth							
720	Truckee River below last Sheep Ranch Ditch return (left bank)				47.65	68.62	4314.	27.8
721	Larsomarsino-Murphy Ditch point return				47.36	68.91	4312.	27.8
722	Larsomarsino-Murphy Ditch point return				47.01	69.26	4309.	27.6
723	Truckee River above last Larsomarsino-Murphy return (right bank)				46.70	69.57	4307.	27.5
724	Larsomarsino-Murphy diversion from Truckee River							
725	Larsomarsino-Murphy Ditch above diversion to grass field							
726	Diversion to Grass Field at Lockwood, NV	USGS	10350145				4380.	
727	Return from Grass Field at Lockwood, NV	USGS	10350146				4350.	
728	Larsomarsino-Murphy Ditch below diversion to grass field							
729	Larsomarsino-Murphy Ditch near Vista, NV	USGS FWM	10350150 58				4360.	
730	Lockwood Road bridge							
731	Long Valley Creek crossing							
732	Larsomarsino-Murphy Ditch return at mouth							
733	Truckee River below last Larsomarsino-Murphy return (right bank)				46.70	69.57	4307.	27.5
734	Truckee River at McCarran Diversion Dam near Patrick	USGS	10350157		46.40	69.87	4305.	27.4
735	Truckee river below McCarran diversion near Patrick, NV				46.35	69.92	4300.	27.4
736	Altitude contour				46.15	70.12	4298.	27.4
737	McCarran Ditch bypass to Truckee River				45.95	70.32	4295.	27.4
738	Cross Section A6				45.04	71.23	4282.	27.2
739	Altitude contour				45.00	71.27	4281.	27.2
740	McCarran Ditch point return				44.97	71.30	4281.	27.2
741	Truckee River at Patrick, NV (McCarran Ranch)	USGS PEL HEW	10350200 TD05 6		44.92	71.35	4281.	27.2
742	Cross Section A7				44.58	71.69	4273.	27.1
743	Channel survey point				44.40	71.87	4273.	27.1

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
744	Channel survey point				44.20	72.07	4272.	27.0
745	McCarran Ditch northside return (left bank)				44.00	72.27	4271.	27.0
746	McCarran Ditch southside return (right bank)				43.87	72.40	4269.	26.9
747	Channel survey point				43.80	72.47	4268.	26.9
748	McCarran Ditch northside return (left bank)				43.66	72.61	4266.	26.9
749	Channel survey point				43.60	72.67	4265.	26.9
750	McCarran Ditch southside return (right bank)				43.45	72.82	4265.	26.8
751	Channel survey point				43.40	72.87	4265.	26.8
752	Channel survey point				43.20	73.07	4261.	26.8
753	Channel survey point				43.15	73.12	4260.	26.8
754	Southern Pacific Railroad bridge				43.05	73.22	4259.	26.8
755	Truckee River above last McCarran Ditch northside return (left bank)				43.04	73.23	4259.	26.8
756	McCarran Ditch diversion from Truckee River							
757	Bypass back to Truckee River							
758	McCarrran Ditch near Patrick, NV	USGS FWM	10350320 61				4320.	
759	Southside split							
760	McCarran Ditch above diversion to grass pasture							
761	Diversion to Grass Pasture below Patrick, NV	USGS	10350325				4300.	
762	Return from Grass Pasture below Patrick, NV	USGS	10350326				4280.	
763	McCarran Ditch below diversion to grass pasture							
764	McCarran Ditch northside return at mouth							
765	Truckee River below last McCarran Ditch northside return (left bank)				43.04	73.23	4259.	26.8
766	Gravel plant return (left bank)				43.02	73.25	4258.	26.8
767	Channel survey point				43.00	73.27	4258.	26.8
768	Channel survey point				42.85	73.42	4258.	26.7
769	Gravel plant return (left bank)				42.84	73.43	4258.	26.7
770	Channel survey point				42.80	73.47	4258.	26.7

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
771	Channel survey point				42.60	73.67	4258.	26.6
772	Channel survey point				42.40	73.87	4258.	26.5
773	Channel survey point				42.20	74.07	4258.	26.5
774	Channel survey point				42.05	74.22	4258.	26.4
775	Truckee River at Hill Diversion Dam	USGS	10350345		42.02	74.25	4258.	26.4
776	Truckee River below Hill Diversion Dam at Tracy, NV				42.00	74.27	4254.	26.5
777	Channel survey point				41.80	74.47	4254.	26.4
778	Gravel plant return (left bank)				41.69	74.58	4252.	26.4
779	Cross section A8				41.54	74.73	4250.	26.3
780	Channel survey point				41.40	74.87	4249.	26.3
781	Channel survey point				41.20	75.07	4248.	26.3
782	Truckee River above Tracy, NV (thermograph)	USGS	10350390		41.17	75.10	4248.	26.2
783	Channel survey point				41.00	75.27	4248.	26.2
784	Hill Ditch return (left bank)				40.97	75.30	4248.	26.2
785	Cross section A9				40.87	75.40	4248.	26.1
786	Channel survey point				40.80	75.47	4247.	26.1
787	Truckee River at Tracy Diversion Dam at Tracy, NV (right bank)				40.76	75.51	4247.	26.1
788	Truckee River below Tracy Diversion Dam at Tracy, NV				40.73	75.54	4244.	26.1
789	Tracy Bridge Truckee River below Tracy, NV	USGS	10350400		40.62	75.65	4243.	26.1
790	Hill Ditch return (left bank)				40.60	75.67	4243.	26.1
791	Truckee River, Right Bank, below Tracy, NV (thermograph)	USGS	10350405		40.55	75.72	4243.	26.1
792	Channel survey point				40.40	75.87	4242.	26.1
793	Channel survey point				39.80	76.47	4242.	25.9
794	Channel survey point				39.60	76.67	4237.	25.9
795	Channel survey point				39.40	76.87	4234.	25.8
796	Channel survey point				39.20	77.07	4233.	25.8
797	Channel survey point				39.00	77.27	4232.	25.7
798	Channel survey point				38.80	77.47	4231.	25.7
799	Cross section A10				38.65	77.62	4231.	25.6
800	Truckee River above last Hill Ditch return (left bank)				38.61	77.66	4230.	25.6

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
801	Hill Ditch diversion from Truckee River							
802	Hill Ditch at Headgate near Tracy, NV	USGS FWM	10350475 62				4280.	
803	Hill Ditch at Tracy, NV	USGS FWM	10350480 63				4280.	
804	Hill Ditch return at mouth							
805	Truckee River below last Hill Ditch return (left bank)				38.61	77.66	4230.	25.6
806	Truckee River at Clark, NV	USGS DRI HEW NDEP PEL	10350500 T 180 7 N310004 TD06		38.60	77.67	4229.	25.6
807	Eagle Picher pump diversion (right bank)				38.44	77.83	4228.	25.6
808	Channel survey point				38.40	77.87	4227.	25.6
809	Old Clark bridge (ruins)				38.31	77.96	4227.	25.6
810	Channel survey point				38.20	78.07	4226.	25.5
811	Channel survey point				38.00	78.27	4226.	25.5
812	Southern Pacific Railroad bridge				37.90	78.37	4224.	25.5
813	Channel survey point				37.80	78.47	4222.	25.4
814	Channel survey point				37.60	78.67	4220.	25.4
815	Channel survey point				37.40	78.87	4218.	25.4
816	Cross section A11				37.21	79.06	4213.	25.4
817	Channel survey point				37.00	79.27	4209.	25.4
818	Channel survey point				36.60	79.67	4209.	25.2
819	Channel survey point				36.40	79.87	4209.	25.2
820	Channel survey point				36.20	80.07	4208.	25.1
821	Channel survey point				36.00	80.27	4205.	25.1
822	Channel survey point				35.40	80.87	4204.	24.9
823	Truckee River above Derby Dam near I-80	HEW	8					
824	"Horseshoe" oxbow cutoff return				35.36	80.91	4204.	24.9
825	Channel survey point				35.00	81.27	4204.	25.1
826	Truckee River at Derby Dam Truckee Canal diversion (right bank)	USGS HEW LE	10351000 9 TR-2		34.88	81.39	4204.	24.8
827	Truckee Canal at Derby Dam				31.50	0.00	4200.	
828	Slattery #1 turnout (TC-T2, vested right)				31.00	0.50		

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
829	Truckee Canal below Derby Dam near Wadsworth, NV	USGS FWM	10351010 65		30.49	1.01	4220.	
830	Slattery #2 turnout (TC-T3, vested right)				30.17	1.33		
831	Thornton turnout (TC-T4)				29.49	2.01		
832	Rocky turnout (TC-T7)				28.65	2.85		
833	Frosdick turnout (TC-T8, vested right)				27.67	3.83		
834	Diversion gate				27.55	3.95		
835	Derby spillway				26.81	4.69		
836	Diversion gate				25.97	5.53		
837	West end of concrete lining				25.92	5.58		
838	Pyramid check (inactive)				25.45	6.05		
839	Tunnel no. 1 (west portal)				25.03	6.47		
840	Tunnel no. 1 (east portal)				24.85	6.65		
841	East end of concrete lining				24.76	6.74		
842	Diversion gate and pipeline				24.71	6.79		
843	Tunnel no. 2 (west portal)				24.10	7.40		
844	Tunnel no. 2 (east portal)				24.04	7.46		
845	West end of concrete lining							
846	East end of concrete lining				23.92	7.58		
847	Gilpin spillway				23.84	7.66		
848	Footbridge				23.64	7.86		
849	Truckee Canal near Wadsworth, NV (base gage)	USGS	10351300		22.94	8.56	4240.	
850	Tunnel no. 3 (west portal)				22.93	8.57		
851	Tunnel no. 3 (east portal)				22.63	8.87		
852	Elevation point							
853	KA (TC-1) turnout diversion gate				21.01	10.49		
854	KA stockwater pipeline				20.59	10.91		
855	Wilson (TC-T13) turnout diversion gate				20.18	11.32		
856	Studer (TC-T14) turnout diversion gate				19.81	11.69		
857	KIB (TC-2) turnout diversion gate				19.16	12.34		
858	KB stockwater turnout				18.66	12.84		
859	KIB (TC-3) turnout Gas pipeline crossing				18.63	12.87		

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
860	KB (TC-4) turnout				18.34	13.16		
861	Truckee Canal at US 95A near Fernley, NV	USGS PEL	10351320 TC10		18.31	13.19	4200.	
862	KBA (TC-5) turnout				18.11	13.39		
863	Fernley Check Dam near Fernley, NV	USGS	10351322		18.10	13.40	4200.	
864	KBA stockwater turnout				17.93	13.57		
865	KBB (TC-T17) stockwater				17.48	14.02		
866	Road bridge and pipeline				16.69	14.81		
867	(TC-T18) abandoned							
868	Diversion gate				16.27	15.23		
869	K2C (TC-T19) turnout				16.20	15.30		
870	Fernley A Drain near Fernley, NV	USGS	10351350				4120.	
871	KC (Picetti TC-T20) stockwater turnout				15.69	15.80		
872	Footbridge				15.58	15.92		
873	Curry pipeline (TC-T21) turnout Diversion gate				15.30	16.20		
874	KC (TC-6) turnout diversion gate KIC (TC-7) turnout diversion gate				15.16	16.34		
875	Truckee Canal at Anderson Check Dam				15.15	16.35	4180.	
876	Stockwater pipe				14.61	16.89		
877	Olsons pond				14.27	17.23		
878	KD (TC-8) turnout				13.76	17.74		
879	KD stockwater							
880	Anderson-Davis (TC-9) turnout				12.79	18.71		
881	Powerline crossing				12.54	18.96		
882	Davis (TC-T25) turnout				12.23	19.27		
883	KE stockwater				11.71	19.79		
884	KE (TC-10) turnout				11.33	20.17		
885	Private (TC-T28) turnout							
886	Truckee Canal at Allendale Check Dam near Hazen, NV	USGS	10351367		11.15	20.35	4180.	
887	Abandoned gage				10.77	20.73		
888	Road bridge				9.85	21.65		
889	Powerline crossing				8.95	22.55		
890	Steneri (TC-T11) turnout				8.16	23.34		

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
891	SP (Hazen) pipeline				6.78	24.72		
892	KF (TC-12, Mason) turnout				6.63	24.87		
893	Truckee Canal at Mason Check Dam				6.47	25.03	4180.	
894	Truckee Canal near Hazen, NV (base gage)	USGS	10351400		6.23	25.27	4180.	
895	Footbridge (measuring site)				4.56	26.94		
896	Road bridge				4.47	27.03		
897	Truckee Canal near Hazen, NV (auxiliary gage) KX (TC-13) turnout	USGS	10351400		3.35 3.35	28.15 28.15		
898	Truckee Canal at Bango Check Dam at Bango, NV				3.33	28.17	4180.	
899	KY (TC-14) turnout				3.13	28.37		
900	Powerline crossing				3.02	28.48		
901	Southwest Gas pipeline crossing				2.87	28.63		
902	Turnout (abandoned, right bank)				1.74	29.76		
903	Southern Pacific Railroad bridge				1.01	30.49		
904	Diversion (TC-131, abandoned, left bank)				0.96	30.54		
905	Highway 50 bridge Truckee Canal at US-50 above Lahontan Reservoir	USGS	10351590		0.52	30.98	4170.	
906	Abandoned gage (right bank)				0.46	31.04		
907	Penstock to powerhouse				0.29	31.21		
908	Road bridge				0.11	31.39		
909	Inlet structure to Lahontan Reservoir				0.00	31.50		
910	Truckee Canal at mouth at Lahontan Reservoir				0.00	31.71		
911	Truckee River at Derby Dam below Derby Dam				34.88	81.39	4204. 4194.	24.8
912	Truckee River below Derby Dam near Wadsworth	USGS DRI KE CDWR	10351600 T 80 S 9 G7 1095.	1676.17	34.52	81.75	4187.	24.9
913	Channel survey point				34.00	82.27	4178.	24.8
914	Cross section B1				33.95	82.32	4178.	24.8
915	Channel survey point				33.80	82.47	4178.	24.7
916	Channel survey point				33.60	82.67	4176.	24.7
917	Channel survey point				33.40	82.87	4171.	24.7
918	Channel survey point				33.20	83.07	4168.	24.7

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
919	Channel survey point				33.00	83.27	4163.	24.7
920	Channel survey point				32.80	83.47	4162.	24.6
921	Truckee Canal irrigation return (right bank)				32.70	83.57	4160.	24.6
922	Channel survey point				32.60	83.67	4158.	24.6
923	Channel survey point				32.40	83.87	4155.	24.6
924	Channel survey point				32.20	84.07	4153.	24.6
925	Channel survey point				32.00	84.27	4151.	24.5
926	Cross section B2				31.81	84.46	4148.	24.5
927	Channel survey point				31.80	84.47	4148.	24.5
928	Channel survey point				31.60	84.67	4146.	24.5
929	Channel survey point				31.40	84.87	4144.	24.4
930	Washburn (Orchard) Ditch diversion				31.30	84.97	4144.	24.4
931	Channel survey point				31.20	85.07	4142.	24.4
932	Orchard Bridge Irrigation Flume Crossing	HEW	10		31.07	85.20	4139.	24.4
933	Channel survey point				31.00	85.27	4138.	24.4
934	Orchard oxbow cutoff return (left bank)				30.87	85.40	4137.	24.4
935	Channel survey point				30.80	85.47	4137.	24.4
936	Channel survey point Truckee Canal irrigation return Orchard diversion (right bank)				30.70	85.57	4133.	24.4
937	Washburn Ditch Return (left bank)				30.60	85.67	4129.	24.4
938	Channel survey point				30.40	85.87	4127.	24.4
939	Derby spillway from Truckee Canal				30.22	86.05	4124.	24.3
940	Channel survey point				30.20	86.07	4124.	24.3
941	Channel survey point				30.00	86.27	4118.	24.4
942	Truckee River above last Washburn Ditch return (left bank)				29.99	86.28	4118.	24.4
943	Washburn Ditch diversion from Truckee River							
944	Washburn Ditch at Orchard, NV	USGS FWM	10351615 64				4170.	
945	Washburn Ditch return at mouth							
946	Truckee River below last Washburn Ditch				29.99	86.28	4118.	24.4
947	return (left bank)							
948	Painted Rock Bridge Truckee River at Painted Rock Bridge	USGS	10351619		29.97	86.30	4118.	24.3

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
949	Southern Pacific Railroad Bridge				29.94	86.33	4117.	24.3
950	Old irrigation diversion to right bank (ruins)				29.90	86.37	4117.	24.3
951	Channel survey point				29.80	86.47	4115.	24.3
952	Channel survey point				29.60	86.67	4114.	24.3
953	Channel survey point				29.40	86.87	4113.	24.2
954	Diversion Dam Gregory-Monte Ditch diversion (left bank) below Diversion Dam				29.33	86.94	4113. 4108.	24.2
955	Channel survey point				29.20	87.07	4107.	24.3
956	Truckee Canal irrigation return Thornton (right bank)				29.00	87.27	4105.	24.2
957	Channel survey point				28.80	87.47	4100.	24.2
958	Channel survey point				28.60	87.67	4096.	24.2
959	Cross section B3				28.50	87.77	4096.	24.2
960	Gregory-Monte Ditch return				28.41	87.86	4095.	24.2
961	Channel survey point				28.40	87.87	4095.	24.2
962	Truckee Canal irrigation return (right bank)				28.20	88.07	4092.	24.2
963	Channel survey point				28.00	88.27	4090.	24.1
964	Channel survey point				27.80	88.47	4089.	24.1
965	Channel survey point				27.60	88.67	4088.	24.0
966	Channel survey point				27.40	88.87	4086.	24.0
967	Gilpin spillway				27.26	89.01	4085.	24.0
968	Channel survey point				27.20	89.07	4084.	24.0
969	Channel survey point				27.00	89.27	4084.	23.9
970	Channel survey point				26.80	89.47	4083.	23.9
971	Diversion Dam Herman Ditch Diversion (left bank) below Diversion Dam				26.75	89.52	4083. 4078.	23.9
972	Channel survey point				26.60	89.67	4078.	23.9
973	Gregory-Monte and Herman Ditch return				26.50	89.77	4077.	23.9
974	Channel survey point				26.40	89.87	4076.	23.8
975	Channel survey point				26.35	89.92	4076.	23.8
976	Channel survey point				26.20	90.07	4075.	23.8
977	Channel survey point				26.00	90.27	4075.	23.8

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
978	Diversion Dam Pierson Ditch diversion (right bank) below Diversion Dam				25.95	90.32	4075. 4070.	23.7
979	Cross Section B4				25.93	90.34	4070.	23.8
980	Channel survey point				25.80	90.47	4070.	23.8
981	Channel survey point				25.60	90.67	4067.	23.7
982	Channel survey point				25.40	90.87	4064.	23.7
983	Pierson Ditch return (right bank)				25.35	90.92	4064.	23.7
984	Channel survey point				25.20	91.07	4063.	23.7
985	I-80 bridge Truckee River at I-80 above Wadsworth	DRI	T 184		25.10	91.17	4062.	23.7
986	Channel survey point				25.00	91.27	4061.	23.6
987	Channel survey point				24.90	91.37	4060.	23.6
988	Channel survey point				24.80	91.47	4058.	23.6
989	Channel survey point				24.60	91.67	4055.	23.6
990	Truckee River above last Pierson Ditch return (right bank)				24.51	91.76	4054.	23.6
991	Pierson Ditch diversion from Truckee River							
992	Pierson Ditch at Wadsworth, NV	USGS FWM	10351630 67				4080.	
993	Pierson Ditch return at mouth							
994	Truckee River below last Pierson Ditch return (right bank)				24.51	91.76	4054.	23.6
995	Channel survey point				24.40	91.87	4053.	23.6
996	Channel survey point				24.20	92.07	4053.	23.5
997	Cross section B5				24.12	92.15	4053.	23.5
998	Channel survey point				24.00	92.27	4053.	23.5
999	Diversion Dam Proctor Ditch diversion (right bank) below Diversion Dam				23.90	92.37	4053. 4048.	23.4
1000	Channel survey point				23.80	92.47	4048.	23.5
1001	Truckee River above last Herman Ditch return (left bank)				23.72	92.55	4047.	23.5
1002	Herman Ditch diversion from Truckee River							
1003	Herman Ditch near Wadsworth, NV	USGS FWM	10351635 66				4080.	
1004	Herman Ditch above Gregory-Monte Ditch							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION AGENCY	HYDROLOGIC DATA COLLECTION AGENCY SITE NUMBER	DRAINAGE AREA (SQ MI)	RIVER MILES ABOVE MOUTH	RIVER MILES BELOW SOURCE	ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
1005	Gregory-Monte Ditch diversion from Truckee River							
1006	Gregory-Monte Ditch near Wadsworth, NV	USGS FWM	10351638 75				4120.	
1007	Gregory-Monte Ditch at mouth							
1008	Herman Ditch below Gregory-Monte Ditch							
1009	Herman Ditch above diversion to alfalfa field							
1010	Diversion to Alfalfa Field at Wadsworth, NV	USGS	10351643				4100.	
1011	Return from Alfalfa Field at Wadsworth, NV	USGS	10351644				4100.	
1012	Herman Ditch below diversion to alfalfa field							
1013	Herman Ditch Return at Wadsworth, NV	USGS	10351646				4070.	
1014	Herman Ditch return at mouth							
1015	Truckee River below last Herman Ditch return (left bank)				23.72	92.55	4047.	23.5
1016	Truckee River at Old US40 Bridge at Wadsworth	USGS KE PEL	10351648 S 10 TD07		23.69	92.58	4047.	23.5
1017	Truckee River at railroad bridge at Wadsworth, NV				23.65	92.62	4047.	23.4
1018	Channel survey point				23.60	92.67	4046.	23.4
1019	Footbridge to Wadsworth School				23.48	92.79	4045.	23.4
1020	Channel survey point				23.40	92.87	4045.	23.4
1021	Cross section C1				23.22	93.05	4044.	23.4
1022	Channel survey point				23.20	93.07	4044.	23.4
1023	Truckee River at Wadsworth, NV	USGS NDEP CDWR	10351650 N310097 G7 1080.	1728.37	23.11	93.16	4043.	23.4
1024	Olinghouse Ditch #1 pump diversion (right bank)				23.05	93.22	4042.	23.4
1025	Olinghouse #1 Diversion Dam				23.02	93.25	4042.	23.3
1026	Channel survey point				23.00	93.27	4042.	23.3
1027	Channel survey point				22.80	93.47	4041.	23.3
1028	Channel survey point				22.60	93.67	4041.	23.3
1029	Truckee River at Fellnagle Diversion Dam (left bank)				22.55	93.72	4038.	23.3
1030	Truckee River below Fellnagle Diversion Dam				22.53	93.74	4038.	23.3
	Ceresola Ranch	DRI	T 54					
	Nevada Water-Quality Standard	WQCP NDEP	 N310005					

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1031	Cross Section C2 Olinshouse Ditch return (right bank)				22.50	93.77	4037.	23.3
1032	Channel survey point				22.40	93.87	4036.	23.3
1033	Proctor Ditch return (right bank)				22.24	94.03	4035.	23.2
1034	Channel survey point				22.20	94.07	4035.	23.2
1035	Channel survey point				22.00	94.27	4032.	23.2
1036	Channel survey point				21.80	94.47	4029.	23.2
1037	Fellnasle Ditch return (left bank)				21.64	94.63	4027.	23.2
1038	Channel survey point				21.60	94.67	4027.	23.2
1039	Channel survey point				21.40	94.87	4025.	23.1
1040	Cross section C3				21.31	94.96	4024.	23.1
1041	Channel survey point				21.20	95.07	4023.	23.1
1042	Channel survey point				21.00	95.27	4021.	23.1
1043	Channel survey point				20.80	95.47	4020.	23.0
1044	Channel survey point				20.60	95.67	4018.	23.0
1045	Channel survey point				20.40	95.87	4017.	23.0
1046	Channel survey point				20.20	96.07	4015.	22.9
1047	Channel survey point				20.00	96.27	4013.	22.9
1048	Truckee River above last Fellnasle Ditch return (left bank)				19.95	96.32	4013.	22.9
1049	Fellnasle Ditch diversion from Truckee River							
1050	Fellnasle Ditch near Wadsworth, NV	USGS FWM	10351660 69				4080.	
1051	Fellnasle Ditch return at mouth							
1052	Truckee River below last Fellnasle Ditch return (left bank) Truckee River at S-S Diversion Dam near Wadsworth Gardella-Capurro (S-S) Ditch diversion (left bank)				19.95	96.32	4013.	22.9
1053	Channel survey point				19.80	96.47	4011.	22.9
1054	Channel survey point				19.60	96.67	4009.	22.9
1055	Ess Site above S-S Ranch				19.51	96.76	4008.	22.8
1056	Cross Section C4				19.46	96.81	4008.	22.8
1057	Channel Survey Point				19.45	96.82	4008.	22.8
1058	Channel survey point				19.40	96.87	4007.	22.8
1059	Channel survey point				19.20	97.07	4004.	22.8

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1060	Truckee River above last Proctor Ditch return (right bank)				19.16	97.11	4004.	22.8
1061	Proctor Ditch diversion from Truckee River							
1062	Proctor Ditch at Wadsworth, NV	USGS FWM	10351668 68				4060.	
1063	Proctor Ditch return at mouth							
1064	Truckee River below last Proctor Ditch return (right bank)				19.16	97.11	4004.	22.8
1065	Channel survey point				19.00	97.27	4002.	22.8
1066	Olinghouse #2 pump diversion (right bank)				18.85	97.42	4000.	22.8
1067	Channel survey point				18.80	97.47	3999.	22.8
1068	Channel survey point				18.60	97.67	3997.	22.8
1069	Olinghouse #2 Ditch return Channel survey point				18.50	97.77	3997.	22.7
1070	Channel survey point				18.40	97.87	3996.	22.7
1071	S-S Ditch return				18.23	98.04	3996.	22.7
1072	Channel survey point				18.20	98.07	3994.	22.7
1073	Channel survey point				18.00	98.27	3992.	22.7
1074	Truckee River at S-S Ranch near Wadsworth, NV S-S pump diversion (left bank)				17.82	98.45	3990.	22.6
1075	Channel survey point				17.80	98.47	3990.	22.6
1076	Channel survey point				17.60	98.67	3989.	22.6
1077	Olinghouse #3 pump diversion (right bank)				17.50	98.77	3989.	22.6
1078	S-S Ranch	KE DRI	511 T 185		17.45	98.82	3988.	22.6
1079	Channel survey point				17.40	98.87	3998.	22.6
1080	Gardell-Capurro Ditch return Channel survey point				17.20	99.07	3986.	22.5
1081	Cross section C5				17.04	99.23	3984.	22.5
1082	Truckee River above last Gardella (S-S) return (left bank)				17.00	99.27	3984.	22.5
1083	Gardella (S-S) Ditch diversion from Truckee River							
1084	Gardella Ditch near Wadsworth, NV	USGS FWM	10351682 70				4000.	
1085	Gardella Ditch return at mouth							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1086	Truckee River below last Gardella (S-S) return (left bank)				17.00	99.27	3984.	22.5
1087	Channel survey point				16.80	99.47	3983.	22.5
1088	Ess site below S-S Ranch				16.75	99.52	3983.	22.5
1089	Channel survey point				16.60	99.67	3982.	22.4
1090	Channel survey point				16.40	99.87	3981.	22.4
1091	Channel survey point				16.20	100.07	3979.	22.4
1092	Channel survey point				16.10	100.17	3978.	22.4
1093	Channel survey point				16.00	100.27	3978.	22.3
1094	Olinshouse #3 Ditch return				15.91	100.36	3977.	22.3
1095	Truckee River 7.9 Miles below Wadsworth, NV River Mile 15.82 (Dye Site C)				15.82	100.45	3976.	22.3
1096	Channel survey point				15.80	100.47	3976.	22.3
1097	Channel survey point				15.60	100.67	3975.	22.3
1098	Cross section C6				15.43	100.84	3974.	22.3
1099	Channel survey point				15.40	100.87	3974.	22.3
1100	Channel survey point				15.20	101.07	3972.	22.2
1101	Channel survey point				15.00	101.27	3971.	22.2
1102	Channel survey point				14.80	101.47	3970.	22.2
1103	Channel survey point				14.60	101.67	3968.	22.1
1104	Channel survey point				14.40	101.87	3967.	22.1
1105	Plite Hatchery #2 (left bank)				14.30	101.97	3967.	22.1
1106	Channel survey point				14.20	102.07	3966.	22.1
1107	Channel survey point				14.00	102.27	3965.	22.0
1108	Cross section C7				13.79	102.48	3964.	22.0
1109	Channel survey point				13.60	102.67	3963.	22.0
1110	Channel survey point				13.40	102.87	3961.	22.0
1111	Channel survey point				13.20	103.07	3960.	21.9
1112	Truckee River at Dead Ox Wash near Nixon, NV Truckee River Intragravel at Dead Ox Cross section C8	USGS KE USGS	10351690 S 12 10351691		13.18	103.09	3960.	21.9
1113	Channel survey point				13.00	103.27	3959.	21.9
1114	Dead Ox ess study site				12.91	103.36	3959.	21.9
1115	Channel survey point				12.80	103.47	3958.	21.9

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1116	Channel survey point				12.60	103.67	3957.	21.8
1117	Channel survey point				12.40	103.87	3957.	21.8
1118	Channel survey point				12.20	104.07	3955.	21.8
1119	Cross section D1				11.99	104.28	3954.	21.7
1120	Channel survey point				11.80	104.47	3953.	21.7
1121	Channel survey point				11.60	104.67	3952.	21.7
1122	Channel survey point				11.40	104.87	3951.	21.6
1123	Channel survey point				11.20	105.07	3950.	21.6
1124	Channel survey point				11.10	105.17	3948.	21.6
1125	Cross section D2				11.02	105.25	3948.	21.6
1126	Channel survey point				10.80	105.47	3948.	21.5
1127	Channel survey point				10.60	105.67	3946.	21.5
1128	Channel survey point				10.40	105.87	3946.	21.5
1129	Channel survey point				10.20	106.07	3944.	21.4
1130	Channel survey point				10.00	106.27	3943.	21.4
1131	Channel survey point				9.95	106.32	3938.	21.4
1132	Channel survey point				9.80	106.47	3938.	21.4
1133	Channel survey point				9.60	106.67	3935.	21.4
1134	Truckee River near Nixon, NV	USGS CDWR	10351700 G7 1060.	1827.34	9.50	106.77	3935.	21.4
1135	Channel survey point				9.40	106.87	3935.	21.4
1136	Channel survey point				9.20	107.07	3931.	21.4
1137	Channel survey point				9.00	107.27	3932.	21.3
1138	Channel survey point				8.80	107.47	3930.	21.3
1139	Channel survey point				8.60	107.67	3930.	21.3
1140	Channel survey point				8.40	107.87	3930.	21.2
1141	Channel survey point				8.25	108.02	3930.	21.2
1142	Numana Dam Truckee River at Numana Dam near Nixon, NV Numana Dam (Indian Ditch) Diversion (left bank) below Dam	USGS	10351725		8.21	108.06	3930. 3920.	21.2
1143	Channel survey point				8.20	108.07	3919.	21.3
1144	Cross section D3				8.16	108.11	3917.	21.3
1145	Channel survey point				8.00	108.27	3917.	21.3

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1146	Channel survey point				7.80	108.47	3917.	21.2
1147	Channel survey point				7.60	108.67	3914.	21.2
1148	Channel survey point				7.40	108.87	3913.	21.2
1149	Channel survey point				7.30	108.97	3913.	21.2
1150	Channel survey point				7.25	109.02	3910.	21.2
1151	Channel survey point				7.20	109.07	3910.	21.2
1152	Channel survey point				7.00	109.27	3908.	21.1
1153	Channel survey point				6.82	109.45	3906.	21.1
1154	Channel survey point				6.80	109.47	3905.	21.1
1155	Channel survey point				6.60	109.67	3905.	21.1
1156	Channel survey point				6.40	109.87	3904.	21.1
1157	Indian Ditch return (left bank)				6.30	109.97	3903.	21.1
1158	Channel survey point				6.25	110.02	3903.	21.1
1159	Channel survey point				6.20	110.07	3902.	21.1
1160	Channel survey point				6.00	110.27	3901.	21.0
1161	Channel survey point				5.80	110.47	3899.	21.0
1162	Cross section D4				5.73	110.54	3899.	21.0
1163	Little Nixon Bridge site				5.71	110.56	3899.	21.0
1164	Eastside Indian Ditch siphon crossing Westside Indian Ditch return (left bank)				5.70	110.57	3899.	21.0
1165	Channel survey point				5.60	110.67	3897.	21.0
1166	Eastside Indian Ditch return (right bank)				5.50	110.77	3897.	21.0
1167	Channel survey point				5.40	110.87	3896.	21.0
1168	Channel survey point				5.20	111.07	3895.	20.9
1169	Cross section D5				5.09	111.18	3894.	20.9
1170	Channel survey point				5.00	111.27	3894.	20.9
1171	Channel survey point				4.80	111.47	3891.	20.9
1172	Channel survey point				4.60	111.67	3890.	20.9
1173	Channel survey point				4.40	111.87	3888.	20.8
1174	Channel survey point				4.20	112.07	3887.	20.8
1175	Channel survey point				4.00	112.27	3886.	20.8
1176	Channel survey point				3.80	112.47	3883.	20.8
1177	Channel survey point				3.60	112.67	3881.	20.8

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1178	Cross section D6				3.55	112.72	3881.	20.7
1179	Channel survey point				3.40	112.87	3879.	20.7
1180	Nixon (Highway 34) bridge Truckee River at Highway 447 at Nixon, NV	USGS LE DRI PEL	10351750 TR-1 T 50 TD08		3.22	113.05	3877.	20.7
1181	Channel survey point				3.20	113.07	3876.	20.7
1182	Cross section D7				3.18	113.09	3876.	20.7
1183	Westside Indian Ditch return (left bank)				1.30	114.97	3864.	20.5
1184	Last Westside Indian Ditch return				1.02	115.25	3862.	20.5
1185	Altitude contour				0.60	115.67	3860.	20.4
1186	Truckee River above last eastside Indian Ditch return (right bank)				0.20	116.07	3857.	20.3
1187	Indian Ditch at Numana Dam diversion from Truckee River							
1188	Indian Ditch near Nixon, NV	USGS FWM	10351755 71				3940.	
1189	Westside/eastside split							
1190	Eastside split to Mud Lake Slough							
1191	Eastside Indidan Ditch return at mouth							
1192	Truckee River below last Eastside Indian Ditch return				0.20	116.07	3857.	20.3
1193	Truckee River at Marble Bluff Dam	USGS PEL	10351775 TD09	1937.43	0.00	116.27	3855.	20.3
1194	Truckee River Fishway diversion from Truckee River							
1195	Truckee River Fishway at Marble Bluff Dam near Nixon, NV	USGS	10351778			-0.07		
1196	Truckee River Fishway diversion at Pyramid Lake					-3.05		
1197	Truckee River below Marble Bluff Dam	USGS	10354780		-0.05		3835.	20.3
1198	Truckee River Delta at Pyramid Lake, NV	USGS	10351793					
1199	Truckee River Delta at Pyramid Lake, NV	USGS	10351795					
1200	Truckee River at mouth (7/3/74)			3118.65	-3.58			
1201	Pyramid Lake near Nixon (1979)	USGS	10336500				3790.	
1202	Inflow into Pyramid Lake below Marble Bluff Dam			2730.08				

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1203	East Fork Carson River (Headwaters of Carson River)				151.84	0.00	9760.	0.0
1204	Altitude contour				151.78	0.06	9680.	1333.3
1205	Altitude contour				151.59	0.25	9600.	640.0
1206	Altitude contour				151.42	0.42	9520.	571.4
1207	Altitude contour				151.27	0.57	9440.	561.4
1208	Altitude contour				151.14	0.70	9360.	571.4
1209	Altitude contour				151.00	0.84	9280.	571.4
1210	Altitude contour				150.82	1.02	9200.	549.0
1211	Altitude contour				150.67	1.17	9120.	547.0
1212	Altitude contour				150.45	1.39	9040.	518.0
1213	Altitude contour				150.28	1.56	8960.	512.8
1214	Altitude contour				150.17	1.67	8880.	526.9
1215	Unnamed tributary (left bank)				149.99	1.85	8830.	502.7
1216	Altitude contour				149.87	1.97	8800.	487.3
1217	Altitude contour				149.71	2.13	8720.	488.3
1218	Altitude contour				149.19	2.65	8640.	422.6
1219	Unnamed tributary (left bank)				149.14	2.70	8625.	420.4
1220	Altitude contour				148.92	2.92	8560.	411.0
1221	Altitude contour				148.79	3.05	8480.	419.7
1222	Altitude contour				148.67	3.17	8400.	429.0
1223	Altitude contour				148.54	3.30	8320.	436.4
1224	Unnamed tributary (right bank)				148.46	3.38	8275.	439.3
1225	Altitude contour				148.39	3.45	8240.	440.6
1226	Altitude contour				148.19	3.65	8160.	438.4
1227	Altitude contour				147.76	4.08	8080.	411.8
1228	Unnamed tributary (left bank)				147.58	4.26	8045.	402.6
1229	Altitude contour				147.32	4.52	8000.	389.4
1230	Altitude contour				147.01	4.83	7920.	381.0
1231	Altitude contour				146.57	5.27	7840.	364.3
1232	Unnamed tributary (right bank)				146.54	5.30	7835.	363.2
1233	Altitude contour				145.90	5.94	7760.	336.7
1234	Unnamed tributary (left bank)				145.83	6.01	7740.	336.1
1235	Altitude contour				145.62	6.22	7680.	334.4

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1236	Altitude contour				145.11	6.73	7600.	321.0
1237	Altitude contour				144.94	6.90	7520.	324.6
1238	Unnamed tributary (right bank)				144.75	7.09	7495.	319.5
1239	Altitude contour				144.37	7.47	7440.	310.6
1240	Altitude contour				144.06	7.78	7360.	308.5
1241	Altitude contour				142.96	8.88	7280.	279.3
1242	Altitude contour				142.91	8.93	7200.	286.7
1243	Golden Canyon Creek (left bank)				142.82	9.02	7175.	286.6
1244	Altitude contour				141.62	10.22	7120.	258.3
1245	Altitude contour				141.31	10.53	7040.	258.3
1246	Unnamed tributary (left bank)				141.08	10.76	6970.	259.3
1247	Altitude contour				141.04	10.80	6960.	259.3
1248	Murray Canyon Creek (left bank)				140.73	11.11	6930.	254.7
1249	Altitude contour				140.25	11.59	6880.	248.5
1250	East Fork Carson River above Soda Springs Ranger Station	USGS CDWR	10302500 G8 3820.	29.34	140.01	11.83	6810.	249.4
1251	Altitude contour				139.97	11.87	6800.	249.4
1252	Altitude contour				139.44	12.40	6720.	245.2
1253	East Fork Carson River	UDRR	94		138.42	13.42	6705.	228.4
1254	Poison Creek (right bank)				137.95	13.89	6695.	219.9
1255	Altitude contour				136.13	15.71	6640.	198.6
1256	Jones Canyon Creek (left bank)				135.67	16.17	6625.	193.9
1257	Bryant Creek (left bank)				135.25	16.59	6610.	189.9
1258	Altitude contour				133.84	18.00	6560.	177.8
1259	Unnamed tributary (right bank)				133.29	18.55	6510.	175.2
1260	Altitude contour				132.93	18.91	6480.	173.4
1261	Snowslide Canyon Creek (left bank)				132.75	19.09	6460.	172.9
1262	Altitude contour				132.15	19.69	6400.	170.6
1263	East Fork Carson River above Silver King Creek (right bank)				132.07	19.77	6395.	170.2
1264	Silver King Creek							
1265	Fly Valley Creek							
1266	Fourmile Canyon Creek							
1267	Bull Canyon Creek							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1268	Unnamed tributary (left bank)							
1269	Unnamed tributary (left bank)							
1270	Coyote Valley Creek							
1271	Corral Valley Creek							
1272	Silver King Creek	UDRR	95				7680.	
1273	Silver King Creek near Coleville	USGS CDWR	10303000 G8 3730.	31.78			7650.	
1274	Snodgrass Creek (right bank)							
1275	Unnamed ditch #1 (right bank)							
1276	Unnamed ditch #2 (right bank)							
1277	Silver King Creek at mouth							
1278	East Fork Carson River below Silver King Creek (right bank)				132.07	19.77	6395.	170.2
1279	Altitude contour				129.79	22.05	6320.	156.0
1280	Unnamed tributary (left bank)				129.66	22.18	6315.	155.3
1281	East Fork Carson River at Silver King Valley near Markleeville	USGS CDWR	10303500 G8 3680.		128.64	23.20	6270.	150.4
1282	Basley Valley Creek (right bank)				128.58	23.26	6265.	150.3
1283	Altitude contour				128.01	23.83	6240.	147.7
1284	Railroad Canyon Creek (left bank)				127.97	23.87	6235.	147.7
1285	Wolf Creek Lake outlet (left bank)				127.53	24.31	6205.	146.2
1286	Altitude contour				126.98	24.86	6160.	144.8
1287	Dixon Mine Road, River-touring put-in, Class III, (left bank)				126.16	25.68	6085.	143.1
1288	Altitude contour				126.11	25.73	6080.	143.0
1289	East Fork Carson River above Wolf Creek (left bank)			113.10	125.58	26.26	6045.	141.5
1290	Wolf Creek							
1291	Unnamed tributary (right bank)							
1292	Unnamed tributary (right bank)							
1293	Elder Creek							
1294	Unnamed tributary (right bank)							
1295	Unnamed tributary (right bank)							
1296	Bull Canyon Creek							
1297	Wolf Creek near Markleeville, CA	USGS CDWR	10304000 G8 3620.	11.34			7360.	

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1298	Dixon Creek							
1299	Upper Wolf Creek	UDRR	93				6640.	
1300	Wolf Creek at Wolf Creek Meadows	CDWR	G8 3614.1				6400.	
1301	Lower Wolf Creek	UDRR	92				6400.	
1302	Wolf Creek at mouth			29.76				
1303	East Fork Carson River below Wolf Creek (left bank)			113.10	125.58	26.26	6045.	141.5
1304	Altitude contour				124.89	26.95	6000.	139.5
1305	Altitude contour				124.20	27.64	5920.	138.9
1306	Altitude contour				123.26	28.58	5840.	137.2
1307	East Fork Carson River above Silver Creek (left bank)			148.44	123.24	28.60	5840.	137.1
1308	Silver Creek							
1309	Lower Kinney Lake outlet							
1310	Kinney Creek							
1311	Eagle Creek							
1312	Raymond Meadows Creek							
1313	Nobel Canyon Creek							
1314	Pennsylvania Creek							
1315	Silver Creek below Pennsylvania Creek near Markleeville, CA	USGS CDWR	10304500 G8 3525.	19.51			6480.	
1316	IXL Canyon Creek							
1317	Silver Creek above West Creek							
1318	West Fork West Creek	UDRR	84				8910.	
1319	Middle Fork West Creek	UDRR	85				8800.	
1320	East Fork West Creek	UDRR	86				8580.	
1321	West Creek below Sale	UDRR	87				7820.	
1322	West Creek at Highway 4	UDRR	88				6600.	
1323	Silver Creek below West Creek							
1324	Silver Creek near Markleeville, CA	USGS CDWR	10305000 G8 3480.	27.30			6160.	
1325	Silver Creek above East Creek							
1326	Upper East Creek	UDRR	89				8400.	
1327	Middle East Creek	UDRR	90				7600.	
1328	East Creek at Highway 4	UDRR	91				6100.	

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1329	East Creek at mouth							
1330	Silver Creek below East Creek							
1331	Silver Creek near mouth to East Fork Carson River	CDWR	G8 3479.75				5920.	
1332	Wolf Creek Road bridge, River-touring Put-in (Class III)							
1333	Silver Creek at mouth			30.79				
1334	East Fork Carson River below Silver Creek (left bank)			148.44	123.24	28.60	5840.	137.1
1335	Highway 4 bridge				122.72	29.12	5800.	136.0
1336	Altitude contour				122.24	29.60	5760.	135.1
1337	Altitude contour				121.07	30.77	5680.	132.6
1338	East Fork Carson River above Monitor Creek (right bank)				120.62	31.22	5655.	131.5
1339	Heenan Creek (Headwaters of Monitor Creek)							
1340	Heenan Lake							
1341	Lexington Canyon Creek							
1342	Goskey Canyon Creek							
1343	Monitor Creek at Mouth	CDWR	G8 3475.01				5680.	
1344	Monitor Creek at mouth							
1345	East Fork Carson River below Monitor Creek (right bank)				120.62	31.22	5655.	131.5
1346	Eagle Gulch Creek (right bank)				119.89	31.95	5620.	129.6
1347	Smiths Creek (right bank)				119.83	32.01	5615.	129.5
1348	Altitude contour				119.52	32.32	5600.	128.7
1349	Poor Boy Creek (left bank)				117.99	33.85	5520.	125.3
1350	Altitude contour				117.81	34.03	5520.	124.6
1351	Altitude contour				117.12	34.72	5480.	123.3
1352	Carson River East Fork at Highway 4	CDWR	G8 3420.2		117.00	34.84	5475.	123.0
1353	East Fork Carson River above Indian Creek (left bank)				116.90	34.94	5470.	122.8
1354	Indian Creek above bridge	UDRR	83					
1355	Indian Creek at mouth							
1356	East Fork Carson River below Indian Creek (left bank)				116.90	34.94	5470.	122.8
1357	Highway 4 (Hansman's) bridge East Fork Carson River near Markleeville, CA River-touring put-in, Class II-III (right bank)	USGS CDWR	10305500 G8 3420.	208.	116.88	34.96	5470.	122.7

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1358	Altitude contour				116.16	35.68	5440.	121.1
1359	East Fork Carson River above Markleeville Creek (left bank)			215.08	115.27	36.57	5410.	119.0
1360	Burnside Lake (Headwaters Markleeville Creek)							
1361	Hot Springs Creek							
1362	Charity Valley Creek							
1363	Sawmill Creek							
1364	Hot Springs Creek near Markleeville, CA	USGS CDWR	10306000 G8 3240.	14.38			5910.	
1365	Buck Creek							
1366	Grovers Hot Springs Tributary (right bank)							
1367	Grovers Hot Springs Tributary (right bank)							
1368	Shay Creek							
1369	Hot Springs Creek below Shay Creek near Markleeville, CA	CDWR	G8 3235.01				5720.	
1370	Markleeville Creek above Musser and Jarvis Creek							
1371	Musser and Jarvis Creek	UDRR	81				5680.	
1372	Musser and Jarvis Creek at mouth							
1373	Markleeville Creek below Musser and Jarvis Creek							
1374	Markleeville Creek above Spratt Creek							
1375	Spratt Creek	UDRR	82				5760.	
1376	Spratt Creek at mouth							
1377	Markleeville Creek below Spratt Creek							
1378	Hot Springs Creek at Markleeville	USGS CDWR	10306500 G8 3185.	26.7			5600.	
1379	Markleeville Creek above Pleasant Valley Creek							
1380	Pleasant Valley Creek							
1381	Unnamed tributary (left bank)							
1382	Tamarack Lake outlet							
1383	Hellhole Lake outlet							
1384	Unnamed tributary (right bank)							
1385	Lower Sunset Lake outlet							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1386	Wet Meadows Lake outlet							
1387	Jeff Davis Creek							
1388	Unnamed tributary (right bank)							
1389	Raymond Lake outlet							
1390	Pleasant Valley Creek above Raymond Canyon Creek near Markleeville, CA	USGS CDWR	10307000 G8 3340.	14.57			5955.	
1391	Raymond Canyon Creek							
1392	Pleasant Valley Creek below Raymond Canyon Creek	CDWR	G8 3302.01				5860.	
1393	Pleasant Valley Creek near Markleeville, CA	USGS CDWR	10307500 G8 3300.	25.13			5580.	
1394	Pleasant Valley Creek at mouth							
1395	Markleeville Creek below Pleasant Valley Creek							
1396	Markleeville Creek at Markleeville, CA	USGS CDWR	10308000 G8 3150.	53.91			5500.	
1397	Markleeville Creek at Markleeville, CA	CDWR	G8 3148.01				5501.	
1398	Millberry Creek at Markleeville, CA	USGS CDWR	10308100 G8 3145.	5.30			5620.	
1399	Markleeville Creek at mouth			61.06				
1400	East Fork Carson River below Markleeville Creek (left bank)			215.08	115.27	36.57	5410.	119.0
1401	Altitude contour				114.92	36.92	5400.	118.1
1402	East Fork Carson River below Markleeville Creek near Markleeville, CA	USGS CDWR	10308200 G8 3140.	276.38	114.75	37.09	5395.	117.7
1403	Altitude contour				113.72	38.12	5360.	115.4
1404	Uppermost extent of proposed Watasheamu Dam				111.22	40.62	5283.	110.2
1405	Altitude contour				111.08	40.76	5280.	110.0
1406	Altitude contour				109.58	42.26	5240.	106.9
1407	Cottonwood Canyon Creek (right bank)				108.55	43.29	5210.	105.1
1408	Altitude contour				108.31	43.53	5200.	104.8
1409	Altitude contour				106.76	45.08	5160.	102.0
1410	California/Nevada State Line East Fork Carson River at CA/NV State Line	USGS CDWR	10308500 G8 3100.	299.60	105.78	46.06	5140.	100.3
1411	Altitude contour				105.01	46.83	5120.	99.1
1412	East Fork Carson River at State Line	NDEP	N310010		104.61	47.23	5100.	98.7
1413	East Fork Carson River above Bryant Creek (right bank)				104.53	47.31	5110.	98.3

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1414	Leviathan Creek (Headwaters Bryant Creek)							
1415	Unnamed tributary (right bank)							
1416	Unnamed tributary (right bank)							
1417	Leviathan Creek	NDEP	N310009				6600.	
1418	Unnamed tributary (right bank)							
1419	Leviathan Creek	UDRR	80				5280.	
1420	Leviathan Creek above Mountaineer Creek							
1421	Mountaineer Creek						6370.	
1422	Poison Creek							
1423	Mountaineer Creek	UDRR	79				6370.	
1424	Leviathan Creek below Mountaineer Creek							
1425	Barney Riley Creek							
1426	Bryant Creek near Gardnerville, NV	USGS CDWR	10308800 G8 3070.	31.5P			5390.	
1427	Doud Springs Creek							
1428	Bryant Creek at mouth							
1429	East Fork Carson River below Bryant Creek (right bank)				104.53	47.31	5110.	98.3
1430	Altitude contour				103.32	48.52	5080.	96.5
1431	East Fork Carson River above Fredricksburg Creek (right bank)				102.45	49.39	5055.	95.3
1432	Fredrioksburg Creek	UDRR	76				5060.	
1433	Fredrioksburg Creek at mouth							
1434	East Fork Carson River below Fredricksburg Creek (right bank)				102.45	49.39	5055.	95.3
1435	Altitude contour				101.80	50.04	5040.	94.3
1436	Altitude contour				100.32	51.52	5000.	92.4
1437	East Fork Carson River near Gardnerville, NV	USGS CDWR	10309000 G8 3050.	356.41	99.90	51.94	4985.11P	91.9
1438	Altitude contour				98.30	53.54	4960.	89.6
1439	East Fork Carson River above Bodie Flat Tributary (right bank)				97.34	54.50	4930.	88.6
1440	Bodie Flat Tributary near Gardnerville River touring take-out (right bank)	USGS	10309005	.46			5680.	
1441	Bodie Flat Tributary at mouth							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE)	AVERAGE SLOPE
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE	SEA (LEVEL)	(FT/MI)
1442	East Fork Carson River below Bodie Flat Tributary (right bank)				97.34	54.50	4930.	88.6
1443	Altitude contour				96.91	54.93	4920.	88.1
1444	Ruhenstroth Diversion Dam Carson Canal (left bank) Ruhenstroth Pump Diversion (right bank)				96.62	55.22		
1445	Dresslerville Indian Reservation bridge				96.46	55.38		
1446	High Flyer Ditch (right bank)				96.44	55.40		
1447	Peter Heitman Ditch (left bank)				96.35	55.49		
1448	Altitude contour East Fork Carson River at Highway 395	NDEP	N310011		96.31	55.53	4900.	87.5
1449	East Fork Carson River above Allerman Canal (right bank)				95.93	55.91	4895.	87.0
1450	Pinenut Creek	UDRR	78				6180.	
1451	Allerman Reservoir							
1452	East Fork Carson River below Allerman Canal (right bank)				95.93	55.91	4895.	87.0
1453	Allerman Diversion Dam				95.91	55.93	4895.	87.0
1454	Altitude contour				95.80	56.04	4890.	86.9
1455	East Fork Carson River above Indian Creek (left bank)				95.55	56.29	4880.	86.7
1456	Indian Creek						6080.	
1457	Diversion from Millberry Creek							
1458	Randall Creek							
1459	Highway 89 bridge							
1460	Unnamed Spring outflow							
1461	Diversion to Scott Creek							
1462	Stevens Lake outlet							
1463	Millich Ditch return							
1464	Indian Creek above Diamond Valley Ditch							
1465	Tributary to Indian Creek Reservoir							
1466	Indian Creek Reservoir							
1467	Indian Creek Reservoir near Dam	CDWR	G8R 845.0 946.6				5600.	
1468	Indian Creek Reservoir at outlet	CDWR	G8 3040.				5595.	
1469	Diamond Valley Ditch							
1470	Airport Road bridge							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1471	Diamond Valley Road bridge							
1472	Indian Creek below Diamond Valley Ditch							
1473	California/Nevada State Line							
1474	Indian Creek at East Fork Carson River	NDEP	N310140				4905.	
1475	Indian Creek at mouth							
1476	East Fork Carson River below Indian Creek (left bank)				95.55	56.29	4880.	86.7
1477	Altitude contour				95.51	56.33	4880.	86.6
1478	Altitude contour				95.17	56.67	4870.	86.3
1479	Buckeye and Wheeler Ditch (right bank)				95.11	56.73	4865.	86.3
1480	Altitude contour				94.92	56.92	4860.	86.1
1481	Bernins Diversion Dam Bernins Ditch (left bank)				94.56	57.28	4855.	85.6
1482	Altitude contour				94.43	57.41	4850.	85.5
1483	Altitude contour				94.12	57.72	4840.	85.2
1484	Altitude contour				93.82	58.02	4830.	85.0
1485	Rocky Slough Diversion (left bank)				93.65	58.19	4825.	84.8
1486	Diversion Dam Upper New Virginia Ditch (right bank)				93.45	58.39	4825.	84.5
1487	Altitude contour				93.19	58.65	4820.	84.2
1488	Riverview Drive bridge East Fork Carson River at Country Club bridge	NDEP	N310137		93.07	58.77	4820.	84.1
1489	Company Ditch (right bank)				92.96	58.88	4815.	83.9
1490	Diversion Dam				92.95	58.89	4815.	83.9
1491	Altitude contour				92.87	58.97	4810.	83.9
1492	Upper Field Ditch (right bank)				92.72	59.12	4805.	83.8
1493	Diversion Dam Henningson Slough (left bank)				92.64	59.20	4805.	83.7
1494	Altitude contour				92.63	59.21	4800.	83.8
1495	Altitude contour				92.23	59.61	4790.	83.4
1496	Diversion Dam Cottonwood Slough (right bank)				92.13	59.71	4785.	83.3
1497	Altitude contour				91.98	59.86	4780.	83.2
1498	Heitman and Company Ditch (left bank)				91.96	59.88	4780.	83.2
1499	Altitude contour				91.58	60.26	4770.	82.8

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1500	Altitude contour				91.30	60.54	4760.	82.6
1501	Highway 56 (Centerville Lane) bridge East Fork Carson River at Centerville Lane	NDEP	N310136		91.02	60.82	4755.	82.3
1502	Altitude contour				90.91	60.93	4750.	82.2
1503	Diversion Dam Stodeik Ditch (left bank)				90.76	61.08	4750.	82.0
1504	Altitude contour				90.58	61.26	4740.	81.9
1505	Madison (or Topping #1)(right bank)				90.16	61.68	4740.	81.4
1506	Diversion Dam				90.13	61.71	4740.	81.4
1507	Topping #2 (right bank)				90.09	61.75	4735.	81.4
1508	Altitude contour				89.99	61.85	4730.	81.3
1509	Diversion Dam St. Louis Straight Ditch (left bank)				89.41	62.43	4725.	80.6
1510	Altitude contour				89.37	62.47	4720.	80.7
1511	Home Slough (Diversion to)(left bank)				89.18	62.66	4720.	80.4
1512	Highway 88 bridge Middle River Ditch Diversion (left bank)				88.74	63.10	4715.	79.9
1513	East Fork Carson River at Minden East Fork Carson River at Highway 88	USGS NDEP	10309100 N310152	392.P	88.72	63.12	4716.11P	79.9
1514	Altitude contour				88.60	63.24	4710.	79.8
1515	East Fork Side Ditch Diversion (left bank)				88.20	63.64	4705.	79.4
1516	Diverson Dam				88.18	63.66	4705.	79.4
1517	Road bridge				88.08	63.76	4700.	79.4
1518	Altitude contour				88.06	63.78	4700.	79.3
1519	East Fork Carson River above Cottonwood Slough Return (right bank)				88.01	63.83	4700.	79.3
1520	Cottonwood Slough at East Fork Carson River	NDEP	N310138				4700.	
1521	Cottonwood Slough at mouth							
1522	East Fork Carson River below Cottonwood Slough Return (right bank)				88.01	63.83	4700.	79.3
1523	Altitude contour				87.69	64.15	4690.	79.0
1524	East Fork Side Ditch Return (left bank)				87.57	64.27	4690.	78.9
1525	East Fork Carson River above Martin Slough	NDEP	N310160		86.67	65.17	4685.	77.9
1526	East Fork Carson River above Martin Slough Return (right bank)				86.62	65.22	4685.	77.8

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1527	Martin Slough at East Fork Carson River Minden STP Discharge to East Fork Carson River	NDEP USGS	N310139 385814119475101				4685.	
1528	Martin Slough Return at mouth							
1529	East Fork Carson River below Martin Slough Return (right bank)				86.62	62.22	4685.	77.8
1530	Highway 19 (Muller Lane) bridge East Fork Carson River at Muller Lane Round Hill STP Discharge to East Fork Carson River	NDEP USGS	N310012 385815119475401		86.59	65.25	4685.	77.8
1531	East Fork Carson River at Williams Slough	NDEP	N310093		86.41	65.43	4680.	77.6
1532	East Fork Carson River above Williams Slough (right bank)				86.39	65.45	4680.	77.6
1533	Round Hill STP Discharge to Williams Slough							
1534	Williams Slough at mouth							
1535	East Fork Carson River below Williams Slough (right bank)				86.39	65.45	4680.	77.6
1536	Altitude contour				86.08	65.76	4680.	77.2
1537	Weir				85.95	65.89		
1538	Altitude contour				84.80	67.04	4670.	75.9
1539	East Fork Carson River at West Fork Carson River	NDEP	N310141		84.48	67.36	4670.	75.6
1540	East Fork Carson River above West Fork Carson River (left bank)				84.44	67.40	4670.	75.5
1541	Lost Lakes outlet (Headwaters of West Fork Carson River)				39.47	0.00	8680.	0.0
1542	Altitude contour				39.45	0.02	8640.	2000.0
1543	Altitude contour				39.44	0.03	8600.	2666.7
1544	Altitude contour				39.43	0.04	8560.	3000.0
1545	Altitude contour				39.42	0.05	8520.	3200.0
1546	Altitude contour				39.41	0.06	8480.	3333.3
1547	Altitude contour				39.40	0.07	8440.	3428.6
1548	Altitude contour				39.39	0.08	8400.	3500.0
1549	Altitude contour				39.38	0.09	8360.	3555.6
1550	Altitude contour				39.36	0.11	8320.	3272.7
1551	Altitude contour				39.35	0.12	8280.	3333.3
1552	Altitude contour				39.33	0.14	8240.	3142.9

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1553	Altitude contour				39.32	0.15	8200.	3200.0
1554	Altitude contour				39.30	0.17	8160.	3058.8
1555	Altitude contour				39.15	0.32	8120.	1750.0
1556	2nd Lost Lakes outlet (left bank)				39.01	0.46	8100.	1260.9
1557	Altitude contour				38.87	0.60	8080.	1000.0
1558	Altitude contour				38.71	0.76	8040.	842.1
1559	Altitude contour				38.62	0.85	8000.	800.0
1560	Altitude contour				38.57	0.90	7960.	800.0
1561	Altitude contour				38.49	0.98	7920.	775.5
1562	Altitude contour				38.40	1.07	7880.	747.7
1563	Altitude contour				38.32	1.15	7840.	730.4
1564	Altitude contour				38.26	1.21	7800.	727.3
1565	Altitude contour				38.05	1.42	7760.	647.9
1566	Altitude contour				37.90	1.57	7720.	611.5
1567	Altitude contour				37.75	1.72	7680.	581.4
1568	Altitude contour				37.63	1.84	7640.	565.2
1569	Altitude contour				37.52	1.95	7600.	553.8
1570	Altitude contour				37.40	2.07	7560.	541.1
1571	Forestdale Creek (left bank)				37.22	2.25	7540.	506.7
1572	Altitude contour				37.05	2.42	7520.	479.3
1573	Altitude contour				35.41	4.06	7480.	295.6
1574	Road bridge				34.93	4.54	7460.	268.7
1575	Altitude contour				34.50	4.97	7440.	249.5
1576	Blue Lake Road bridge				34.25	5.22	7420.	241.4
	West Fork Carson River at Blue Lake Road Bridge	UDRR	77					
	West Fork Carson River below West Valley	CDWR	G8 2415.01					
1577	Altitude contour				34.04	5.43	7400.	235.7
1578	Altitude contour				33.92	5.55	7360.	237.8
1579	Altitude contour				33.82	5.65	7320.	240.7
1580	Altitude contour				33.58	5.89	7280.	237.7
1581	Altitude contour				33.37	6.10	7240.	236.1
1582	Altitude contour				33.09	6.38	7200.	232.0
1583	Altitude contour				32.93	6.54	7160.	232.4

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1584	Altitude contour				32.12	7.35	7120.	212.2
1585	West Fork Carson River above Red Lake Creek (left bank)				32.01	7.46	7120.	209.1
1586	Red Lake							
1587	Red Lake Creek at Highway 88	CDWR	G8 2411.75				7470.	
1588	Crater Lake outflow							
1589	Red Lake Creek at mouth							
1590	West Fork Carson River below Red Lake Creek (left bank)				32.01	7.46	7120.	209.1
1591	Hawkins Creek (right bank)				31.76	7.71	7115.	203.0
1592	Scotts Lake outflow (left bank)				29.54	9.93	7095.	159.6
1593	Unnamed tributary (right bank)				29.32	10.15	7090.	156.6
1594	Highway 88 bridge				28.24	11.23	7080.	142.5
1595	Altitude contour				28.20	11.27	7080.	142.0
1596	Old Highway 89 bridge				26.86	12.61	7050.	129.3
1597	Highway 89 bridge				26.59	12.88	7045.	126.9
1598	Unnamed tributary (left bank)				26.53	12.94	7045.	126.4
1599	West Fork Carson River above Willow Creek (left bank)				26.43	13.04	7045.	125.4
1600	Willow Creek							
1601	Willow Creek near mouth in Hope Valley	CDWR	G8 2405.1				7100.	
1602	Willow Creek at mouth							
1603	West Fork Carson River below Willow Creek (left bank)				26.43	13.04	7045.	125.4
1604	Altitude contour				26.29	13.18	7040.	124.4
1605	Altitude contour				26.03	13.44	7000.	125.0
1606	Altitude contour				25.91	13.56	6960.	126.8
1607	Altitude contour				25.76	13.71	6920.	128.4
1608	Altitude contour				25.38	14.09	6880.	127.8
1609	Unnamed tributary (left bank)				25.31	14.16	6875.	127.5
1610	West Fork Carson River above Woodfords	USGS CDWR	10309500 G8 2400.	66.0	25.21	14.26	6865.	127.3
1611	Highway 88/89 bridge				25.10	14.37	6855.	127.0
1612	Altitude contour				24.96	14.51	6840.	126.8
1613	Altitude contour				24.90	14.57	6800.	129.0

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1614	Altitude contour				24.85	14.62	6760.	131.3
1615	Road bridge				24.75	14.72	6740.	131.8
1616	Altitude contour				24.63	14.84	6720.	132.0
1617	Altitude contour				24.50	14.97	6680.	133.6
1618	Altitude contour				24.35	15.12	6640.	134.9
1619	Altitude contour				24.25	15.22	6600.	136.7
1620	Altitude contour				24.15	15.32	6560.	138.4
1621	Horsethief Canyon Creek (left bank)				24.05	15.42	6530.	139.4
1622	Altitude contour				24.02	15.45	6520.	139.8
1623	Altitude contour				23.91	15.56	6480.	141.4
1624	Hidden Canyon Creek (left bank)				23.78	15.69	6455.	141.8
1625	Altitude contour				23.69	15.78	6440.	142.0
1626	Highway 88/89 bridge				23.55	15.92	6420.	142.0
1627	Altitude contour				23.38	16.09	6400.	141.7
1628	Road bridge				23.28	16.19	6385.	141.8
1629	Deer Canyon Creek (right bank)				23.17	16.30	6380.	141.1
1630	Altitude contour				23.14	16.33	6360.	142.1
1631	Altitude contour				22.95	16.52	6320.	142.9
1632	Altitude contour				22.78	16.69	6280.	143.8
1633	Altitude contour				22.67	16.80	6240.	145.2
1634	Altitude contour				22.59	16.88	6200.	146.9
1635	Altitude contour				22.49	16.98	6160.	148.4
1636	Altitude contour				22.41	17.06	6120.	150.1
1637	Cloudburst Canyon Creek (right bank)				22.39	17.08	6110.	150.5
1638	Altitude contour				22.32	17.15	6080.	151.6
1639	Altitude contour				22.21	17.26	6040.	153.0
1640	Altitude contour				22.11	17.36	6000.	154.4
1641	Altitude contour				21.97	17.50	5960.	155.4
1642	Highway 88/89 bridge				21.91	17.56	5935.	156.3
1643	Altitude contour				21.87	17.60	5920.	156.8
1644	Altitude contour				21.76	17.71	5880.	158.1
1645	Merk Canyon Creek (right bank)				21.67	17.80	5855.	158.7
1646	Acorn Canyon Creek (left bank)				21.64	17.83	5845.	159.0

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1647	Altitude contour				21.62	17.85	5840.	159.1
1648	Road bridge				21.47	18.00	5805.	159.7
1649	Altitude contour				21.45	18.02	5800.	159.8
1650	Altitude contour				21.26	18.21	5760.	160.4
1651	West Fork Carson River at Woodfords, CA	USGS CDWR	10310000 G8 2300.	65.4	21.17	18.30	5754.5P	159.9
1652	Millich Ditch (right bank)				20.94	18.53	5725.	159.5
1653	Altitude contour				20.90	18.57	5720.	159.4
1654	Altitude contour				20.75	18.72	5680.	160.3
1655	Unnamed Springs outflow (left bank)				20.66	18.81	5670.	160.0
1656	Altitude contour				20.46	19.01	5640.	159.9
1657	Cary Canyon Creek (left bank)				20.42	19.05	5630.	160.1
1658	Highway 4/89 bridge				20.30	19.17	5600.	160.7
1659	Altitude contour				20.29	19.18	5600.	160.6
1660	Snowshoe Thompson #2 Ditch Diversion (right bank)				20.09	19.38	5570.	160.5
1661	Altitude contour				20.04	19.43	5560.	160.6
1662	Altitude contour				19.82	19.65	5520.	160.8
1663	Wade Canyon Creek (left bank)				19.69	19.78	5500.	160.8
1664	Unnamed Springs outflow (left bank)				19.59	19.88	5480.	161.0
1665	Altitude contour				19.55	19.92	5480.	160.6
1666	Unnamed Springs outflow (left bank)				19.40	20.07	5455.	160.7
1667	Voight Canyon Creek (left bank)				19.36	20.11	5450.	160.6
1668	Altitude contour				19.30	20.17	5440.	160.6
1669	Altitude contour				19.10	20.37	5400.	161.0
1670	Altitude contour				18.81	20.66	5360.	160.7
1671	Road bridge				18.65	20.82	5340.	160.4
1672	Altitude contour				18.48	20.99	5320.	160.1
1673	Unnamed Springs outflow (left bank)				18.41	21.06	5310.	160.0
1674	Altitude contour				18.21	21.26	5280.	159.9
1675	Altitude contour				17.79	21.68	5240.	158.7
1676	Altitude contour				17.37	22.10	5200.	157.5
1677	Altitude contour				17.06	22.41	5160.	157.1
1678	Road bridge				16.96	22.51	5150.	156.8

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1679	Altitude contour				16.67	22.80	5120.	156.1
1680	Diamond Valley Ditch (right bank)				16.58	22.89	5110.	156.0
1681	Diamond Valley Road bridge West Fork Carson River near Highway 88, CA	NDEP	N310008		16.36	23.11	5080.	155.8
1682	Altitude contour				16.35	23.12	5080.	155.7
1683	Fredricksburg Ditch Diversion (left bank)				16.31	23.16	5075.	155.7
1684	Altitude contour				15.92	23.55	5040.	154.6
1685	Altitude contour				15.47	24.00	5000.	153.3
1686	Altitude contour				14.92	24.55	4960.	151.5
1687	Falk and Tillman Ditch Diversion (right bank)				14.89	24.58	4960.	151.3
1688	Deluchi No. 1 Diversion (right bank)				14.72	24.75	4950.	150.7
1689	Altitude contour				14.22	25.25	4920.	148.9
1690	California/Nevada State Line Deluchi No. 3 Diversion (left bank)				13.85	25.62	4900.	147.5
1691	Altitude contour				13.52	25.95	4880.	146.4
1692	Dam				13.46	26.01	4875.	146.3
1693	Dry Ditch (left bank)				13.45	26.02	4875.	146.2
1694	Dutch Fred #2 (left bank)				13.07	26.40	4855.	144.9
1695	Deluchi No. 1 Return (right bank)				13.03	26.44	4850.	144.9
1696	Altitude contour				12.86	26.61	4840.	144.3
1697	West Fork Carson River above Mud Lake outlet (right bank)				12.54	26.93	4825.	143.2
1698	Mud Lake Diversion from Indian Creek							
1699	Mud Lake at inlet				-1.00			
1700	Mud Lake at outlet				1.50			
1701	Altitude contour				1.53		5080.	
1702	Altitude contour				1.68		5040.	
1703	Altitude contour				1.90		5000.	
1704	Altitude contour				2.29		4960.	
1705	Altitude contour				2.49		4920.	
1706	Altitude contour				2.68		4880.	
1707	Altitude contour				3.44		4840.	
1708	Mud Lake outlet at West Fork Carson River							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1709	Mud Lake outlet at mouth							
1710	West Fork Carson River below Mud Lake outlet (right bank)				12.54	26.93	4825.	143.2
1711	Altitude contour				12.49	26.98	4820.	143.1
1712	Altitude contour				12.11	27.36	4800.	141.8
1713	Dam				11.80	27.67	4790.	140.6
1714	Jones East Ditch (right bank)				11.74	27.73	4790.	140.3
1715	Dressler Lane bridge West Fork Carson River at Dresslerville Road	NDEP	N310163		11.56	27.91	4785.	139.6
1716	New Settlemeyer Diversion (left bank)				11.55	27.92	4785.	139.5
1717	Altitude contour				11.36	28.11	4780.	138.7
1718	Unnamed diversion (right bank)				10.80	28.67	4770.	136.4
1719	Road bridge				10.63	28.84	4765.	135.7
1720	Brockliss Slough Diversion (left bank)				10.58	28.89	4765.	135.5
1721	Dam				10.57	28.90	4765.	135.5
1722	Jones East Ditch Return (right bank)				10.42	29.05	4760.	134.9
1723	Altitude contour				10.40	29.07	4760.	134.8
1724	Road bridge Jones Dam A Ditch (left bank)				10.28	29.19	4760.	134.3
1725	Jones Dam B Ditch (left bank)				10.07	29.40	4755.	133.5
1726	Jones East Ditch (right bank)				9.95	29.52	4750.	133.1
1727	Altitude contour				9.87	29.60	4750.	132.8
1728	Squires Ditch (left bank)				9.64	29.83	4745.	131.9
1729	Dam				9.63	29.84	4745.	131.9
1730	Altitude contour				9.37	30.10	4740.	130.9
1731	Unnamed return (right bank)				9.22	30.25	4740.	130.2
1732	Road bridge				9.20	30.27	4735.	130.3
1733	Winkleman Diversion (right bank)				9.12	30.35	4735.	130.0
1734	Highway 88 bridge				8.73	30.74	4730.	128.5
1735	Altitude contour				8.71	30.76	4730.	128.4
1736	Road bridge				8.51	30.96	4725.	127.7
1737	Altitude contour				8.12	31.35	4720.	126.3
1738	Centerville Lane bridge West Fork Carson River at Centerville Lane	NDEP	N310142		7.40	32.07	4715.	123.6

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1739	Winkleman Return (right bank)				7.38	32.09	4715.	123.6
1740	West Fork Carson River above Middle Rocky Slough Return (right bank)				6.96	32.51	4715.	122.0
1741	Middle Rocky Slough at West Fork Carson River	NDEP	N310143				4715.	
1742	Middle Rocky Slough at mouth							
1743	West Fork Carson River below Middle				6.96	32.51	4715.	122.0
1744	Rocky Slough Return (right bank)							
1745	Rabe Diversion (left bank)				6.62	32.85	4710.	120.8
1746	West Fork Carson River above Rocky Slough Return (right bank)				6.43	33.04	4710.	120.2
1747	Rocky Slough Diversion from East Fork Carson River							
1748	Rocky Slough at West Fork Carson River	NDEP	N310144				4710.	
1749	Rocky Slough at mouth							
1750	West Fork Carson River below Rocky Slough Return (right bank)				6.43	33.04	4710.	120.2
1751	Altitude contour				6.36	33.11	4710.	119.9
1752	Heise Co. Ditch Return (right bank)				6.12	33.35	4710.	119.0
1753	Unnamed Drain Return (right bank)				5.65	33.82	4705.	117.5
1754	Waterloo Lane bridge West Fork Carson River at Mottsville Lane	NDEP	N310146		5.37	34.10	4700.	116.7
1755	Altitude contour				5.36	34.11	4700.	116.7
1756	West Fork Carson River above Henningson Slough Return (right bank)				5.24	34.23		
1757	Henningson Slough at West Fork Carson River	NDEP	N310147					
1758	Henningson Slough Return at mouth							
1759	West Fork Carson River below Henningson Slough Return (right bank)				5.24	34.23		
1760	Dam Dansberg West Diversion (left bank)				4.71	34.76		
1761	West Fork Carson River above St. Louis Straight Ditch Return (right bank)				4.44	35.03		
1762	St. Louis Straight Ditch Diversion from East Fork Carson River							
1763	St. Louis Ditch at West Fork Carson River	NDEP	N310148					
1764	St. Louis Straight Ditch Return at mouth							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1765	West Fork Carson River below St. Louis Straight Ditch return (right bank)				4.44	35.03		
1766	Powerline crossing				4.16	35.31		
1767	Van Sickle Dam Ditch A-3 (right bank)				3.37	36.10		
1768	Van Sickle Dam Ditch B-1 (left bank)				3.21	36.26		
1769	Altitude contour Van Sickle Dam Ditch B-2 (left bank) Van Sickle Dam Ditch C (left bank)				3.10	36.37	4690.	109.7
1770	Dam				3.07	36.40		
1771	Muller Bartle's Dam Diversion (left bank)				2.38	37.09		
1772	Dam				2.37	37.10		
1773	Altitude contour				2.36	37.11	4680.	107.8
1774	Van Sickle Dam Ditch A-3 return (right bank)				1.76	37.71	4675.	106.2
1775	Highway 19 (Muller Lane) bridge West Fork Carson River at Muller Lane	NDEP	N310165		1.69	37.78	4675.	106.0
1776	Altitude contour				1.05	38.42	4670.	104.4
1777	West Fork Carson River above Home Slough Return (right bank)				0.23	39.24	4670.	102.2
1778	Home Slough Diversion from East Fork Carson River							
1779	Home Slough above Middle River Ditch Return							
1780	Middle River Ditch Diversion from East Fork Carson River							
1781	Middle River Ditch at mouth							
1782	Home Slough below Middle River Ditch Return							
1783	Middle River Ditch (Home Slough) at West Fork Carson River	NDEP	N310150				4670.	
1784	Home Slough at mouth							
1785	West Fork Carson River below Home Slough Return (right bank)				0.23	39.24	4670.	102.2
1786	West Fork Carson River at Brockliss Slough (Old channel)	NDEP	N310149		0.20	39.27	4670.	102.1
1787	West Fork Carson River above Brockliss Slough Return (Old channel)(left bank)				0.16	39.31	4670.	102.0
1788	Brockliss Slough Diversion (Old channel) from Brockliss Slough							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1789	Brockliss Slough above East Brockliss Slough Return (right bank)							
1790	East Brockliss Slough Diversion from Brockliss Slough							
1791	East Brockliss Slough at West Brockliss Slough	NDEP	N310134				4690.	
1792	Road bridge							
1793	Road bridge							
1794	Muller Lane bridge							
1795	East Brockliss Slough at Muller Lane	NDEP	N310062				4675.	
1796	East Brockliss Slough at mouth							
1797	Brockliss Slough below East Brockliss Slough (right bank)							
1798	Brockliss Slough at West Fork Carson River (Old channel)	NDEP	N310135				4670.	
1799	Brockliss Slough at mouth							
1800	West Fork Carson River below Brockliss Slough Return (Old channel)(right bank)				0.16	39.31	4670.	102.0
1801	West Fork Carson River at mouth				0.00	39.47	4670.	101.6
1802	Carson River below West Fork Carson River (left bank)				84.44	67.40	4670.	75.5
1803	Genoa Lane bridge			570.P	83.90	67.94	4660.P	75.1
	Carson River at Genoa	USGS	10310405					
	Carson River at Genoa Lane	NDEP	N310013					
1804	Altitude contour				82.81	69.03	4660.	73.9
1805	Carson River above Brockliss Slough Return (Hollister Slough)(left bank)				82.79	69.05		
1806	Brockliss Slough Diversion from West Fork Carson River				12.80	0.00	4765.	0.0
1807	Brockliss Slough Headwater at West Fork Carson River	NDEP	N310130		12.77	0.03	4765.	0.0
1808	Altitude contour				12.53	0.27	4760.	18.5
	Dam							
	Tucke Co. Diversion (left bank)							
1809	Road crossing				12.34	0.46		
1810	Altitude contour				11.91	0.89	4750.	16.8
1811	Altitude contour				11.89	0.91	4740.	27.5
1812	Kimmerling Return (left bank)				11.70	1.10		
1813	Highway 88 bridge				11.68	1.12		
	West Brockliss Slough at Highway 88	NDEP	N310131					

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1814	Bart Cary Diversion (right bank)				11.67	1.13		
1815	Diversion Dam				11.64	1.16		
1816	Park and Bull Diversion (left bank)				11.37	1.43		
1817	Diversion Dam				11.33	1.47		
1818	Altitude contour				11.24	1.56	4730.	22.4
1819	Road bridge				10.99	1.81	4725.	22.1
1820	Altitude contour				10.58	2.22	4720.	20.3
1821	Hansen Dam Upper Diversion (left bank)				9.87	2.93		
1822	East Side Ditch Diversion (right bank)				9.78	3.02		
1823	Dam				9.77	3.03		
1824	Centerville Lane bridge Brockliss Slough at Centerville Lane	NDEP	N310161		9.40	3.40	4710.	16.2
1825	Altitude contour				9.26	3.54	4710.	15.5
1826	Park Dam Diversion (right bank)				9.03	3.77		
1827	Johnson Slough Diversion (left bank)				8.62	4.18		
1828	Unnamed Diversion (right bank)				8.31	4.49		
1829	Hickey No. 1 or Hickey East (right bank)				8.23	4.57		
1830	Hickey No. 4 or Hickey West(left bank)				7.98	4.82		
1831	Dam				7.96	4.84		
1832	Waterloo Lane bridge West Brockliss Slough at Mottsville Lane Rodgers (Thompson)(left bank)	NDEP	N310132		7.61	5.19	4700.	12.5
1833	Altitude contour Line or Middle Diversion (left bank)				7.60	5.20	4700.	12.5
1834	Center or Thompson Diversion (left bank)				7.30	5.50		
1835	Diversion Dam				7.29	5.51		
1836	Road bridge				6.91	5.89		
1837	Hansen Ditch Diversion (left bank) Dansbery West Return (right bank)				6.88	5.92		
1838	Dam Hansen Ditch (left bank)				6.80	6.00		
1839	Dam Supply or Allerman and Johnson Diversion (right bank)				6.67	6.13		
1840	Road bridge				6.03	6.77		
1841	Unnamed diversion (right bank)				5.41	7.39		

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1842	Road bridge				5.37	7.43		
1843	Altitude contour				5.31	7.49	4690.	10.0
1844	Brockliss Slough above Johnson Slough Return (left bank)				4.98	7.82	4690.	9.6
1845	Johnson Slough Diversion from Brockliss Slough							
1846	Johnson Slough above Big Ditch return							
1847	Big Ditch Diversion from Brockliss Slough							
1848	Park and Bull Slough							
1849	Big Ditch at mouth							
1850	Johnson Slough below Big Ditch Return							
1851	Johnson Slough at mouth	NDEP	N310133				4690.	
1852	Johnson Slough at mouth							
1853	Brockliss Slough below Johnson Slough Return (left bank)				4.98	7.82	4690.	9.6
1854	Road bridge				4.77	8.03	4685.	10.0
1855	West Brockliss Slough above East Brockliss Slough	NDEP	N310162		4.53	8.27	4685.	9.7
1856	East Brockliss Slough Diversion (right bank)				4.49	8.31	4685.	9.6
1857	Road bridge				4.29	8.51	4685.	9.4
1858	Road bridge (Diversion gate)				3.93	8.87	4680.	9.6
1859	Altitude contour				3.60	9.20	4680.	9.2
1860	Brockliss Slough above Dassett Creek (left bank)				3.23	9.57		
1861	Dassett Creek	UDRR	75				5780.	
1862	Dassett Creek near Genoa	USGS CDWR	10310400 GB 1800.				5100.P	
1863	Dassett Creek at Foothill Road	NDEP	N3100017				4720.	
1864	Dassett Creek at mouth							
1865	Brockliss Slough below Dassett Creek (left bank)				3.23	9.57		
1866	Dam				3.14	9.66		
1867	Highway 19 (Muller Lane) bridge Brockliss Slough at Muller Lane	NDEP	N310060		2.92	9.88		
1868	Walley's Hot Springs							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1869	Brockliss Slough (Former Channel) Diversion (right bank)							
1870	Brockliss Slough at mouth				0.00	12.80		
1871	Carson River below Brockliss Slough Return (Hollister Slough)(left bank)				82.79	69.05	4660.	73.9
1872	Unnamed diversion (right bank)				82.40	69.44	4660.	73.4
1873	Unnamed return (right bank)				81.52	70.32	4655.	72.6
1874	Unnamed diversion (left bank)				81.34	70.50	4655.	72.4
1875	Unnamed return (right bank)				81.22	70.62	4655.	72.3
1876	Unnamed return (right bank)				81.06	70.78	4655.	72.1
1877	Road bridge				80.46	71.38	4650.	71.6
1878	Altitude contour				80.07	71.77	4650.	71.2
1879	Unnamed Slough return (right bank)				79.52	72.32	4650.	70.7
1880	Unnamed return (left bank)				79.46	72.38	4650.	70.6
1881	Carson River above Williams Slough Return (right bank)				78.72	73.12	4645.	70.0
1882	Williams Slough Diversion from East Fork Carson River							
1883	Round Hill STP Discharge to Williams Slough	USGS	385824119480301				4680.	
1884	Williams Slough at mouth							
1885	Carson River below Williams Slough Return (right bank)				78.72	73.12	4645.	70.0
1886	Carson River above Ambrosetti Return (right bank)				78.15	73.69	4645.	69.4
1887	Ambrosetti Return at Carson River	NDEP	N310151				4645.	
1888	Ambrosetti Return at mouth							
1889	Carson River below Ambrosetti Return (right bank)				78.15	73.69	4645.	69.4
1890	Highway 395 (Cradlebaugh) bridge Carson River at Cradlebaugh Bridge	USGS NDEP	390252119464401 N310014		77.74	74.10	4645.	69.0
1891	Carson River above Unnamed Return (left bank)				77.58	74.26	4645.	68.9
1892	Incline STP Discharge near Snyder's Ranch	USGS	390523119493101				5165.	
1893	Water Canyon	UDRR	74				5185.	
1894	Unnamed Return at mouth							
1895	Carson River below Unnamed Return (left bank)				77.58	74.26	4645.	68.9

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1896	Unnamed return (left bank)				76.47	75.37	4640.	67.9
1897	Unnamed return (left bank)				76.42	75.42	4640.	67.9
1898	Unnamed return (left bank)				76.37	75.47	4640.	67.8
1899	Altitude contour				76.29	75.55	4640.	67.8
1900	Unnamed return (left bank)				75.94	75.90	4640.	67.5
1901	Unnamed return (right bank)				75.35	76.49	4635.	67.0
1902	Incline STP Discharge to Carson River	USGS	390426119460401		75.05	76.79	4635.	66.7
1903	Unnamed return (right bank)				74.62	77.22	4635.	66.4
1904	Altitude contour				73.21	78.63	4630.	65.2
1905	Carson River above Clear Creek Return (left bank)				71.91	79.93	4625.	64.2
1906	Clear Creek							
1907	Kings Canyon Road							
1908	Highway 50 bridge							
1909	Unnamed Spring							
1910	Old Highway 50 bridge							
1911	Unnamed tributary (right bank)							
1912	Diversion (Aqueduct) to Bennit Canyon							
1913	Unnamed Spring							
1914	Clear Creek near Carson City	USGS CDWR	10310500 GB 1500.	15.5P			4977.	
1915	Road bridge							
1916	Clear Creek	UDRR	73				4790.	
1917	Highway 395 bridge							
1918	Road bridge							
1919	Road bridge							
1920	Road bridge							
1921	Diversion to Gravel Pit							
1922	Clear Creek at Carson River	NDEP	N310153				4625.	
1923	Clear Creek at mouth							
1924	Carson River below Clear Creek Return (left bank)				71.91	79.93	4625.	64.2
1925	Unnamed return (left bank)				71.82	80.02	4625.	64.2
1926	McTarnahan Bridge Site (ruins)			885.66	71.54	80.30	4625.	64.0
1927	Unnamed return (right bank)				71.21	80.63	4625.	63.7

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1928	Carson River near Carson City, NV	USGS NDEP CDWR	10311000 N310167 G8 1450.	876.P	70.40	81.44	4620.48P	63.1
1929	Altitude contour				70.36	81.48	4620.	63.1
1930	Mexican Ditch Diversion Dam Mexican Ditch (left bank)				69.00	82.84	4615.	62.1
1931	Lloyds bridge Carson River at Pinion Hills Bridge	NDEP	N310021		67.33	84.51	4605.	61.0
1932	Diversion Pump (left bank)				67.23	84.61		
1933	Altitude contour				67.01	84.83	4600.	60.8
1934	Carson River above Eagle Valley Drain (left bank)				64.54	87.30	4595.	59.2
1935	Kings Canyon Creek (Headwaters Eagle Valley Drain)							
1936	Road bridge							
1937	Unnamed tributary (left bank)							
1938	Kings Canyon Creek above North Kings Canyon Creek							
1939	North Kings Canyon Creek							
1940	Unnamed tributary (right bank)							
1941	Falls							
1942	Kings Canyon Road bridge							
1943	North Kings Canyon Creek at mouth							
1944	Kings Canyon Creek below North Kings Canyon Creek							
1945	Kings Canyon Creek near Carson City	USGS	10311100	4.06			5180.P	
1946	Kings Canyon Creek	UDRR	72				5055.	
1947	Kings Canyon Road bridge							
1948	King Street bridge							
1949	Kings Canyon Creek above Ash Canyon Drain							
1950	Ash Canyon							
1951	Unnamed tributary (left bank)							
1952	Ash Canyon Creek	UDRR	71				5140.	
1953	Ash Canyon Creek near Carson City	USGS	10311200	5.20			5055.	
1954	Ash Canyon Creek above Carson Hot Springs Drain							
1955	Carson Hot Springs							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1956	Carson Hot Springs Drain at mouth							
1957	Ash Canyon Drain below Carson Hot Springs Drain							
1958	Ash Canyon Drain at mouth							
1959	Eagle Valley Drain below Ash Canyon Drain							
1960	Carson City STP Outfall							
1961	North Edmonds Drive bridge							
1962	Mexican Ditch crossing							
1963	Eagle Valley Drain at mouth							
1964	Carson River below Eagle Valley Drain (left bank)				64.54	87.30	4595.	59.2
1965	Carson City STP Discharge to Carson River	USGS	391036119422401		64.52	87.32	4595.	59.2
1966	Carson River above Mexican Ditch Return (left bank)				64.26	87.58	4595.	59.0
1967	Mexican Dam Diversion from Carson River							
1968	Mexican Ditch at Carson River	NDEP	N310154					
1969	Mexican Ditch at mouth							
1970	Carson River below Mexican Ditch Return (left bank)				64.26	87.58	4595.	59.0
1971	Carson River above Irrigation Return (left bank)				64.15	87.69	4595.	58.9
1972	Irrigation Return Downstream Mexican Ditch	NDEP	N310155					
1973	Irrigation Return at mouth							
1974	Carson River below Irrigation Return (left bank)				64.15	87.69	4595.	58.9
1975	Deer Run Road bridge				63.38	88.46	4595.	58.4
1976	Carson River near Deer Run Road Carson River near New Empire River touring put-in (Class II-III)	USGS NDEP	10311400 N310015	958.29	63.36	88.48	4595.	58.4
1977	Brunswick Mill Diversion Dam (ruins)				62.84	89.00	4595.	58.0
1978	Brunswick Canyon Road bridge				62.50	89.34	4590.	57.9
1979	Carson River above Brunswick Canyon Creek (right bank)				62.45	89.39	4590.	57.8
1980	Brunswick Canyon near New Empire	USGS	10311450	12.7P			4680.	
1981	Brunswick Canyon Creek at mouth							
1982	Carson River below Brunswick Canyon Creek (right bank)				62.45	89.39	4590.	57.8

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
1983	Brunswick Mill Site (ruins) Carson River near New Empire, NV	USGS CDWR	10311500 G8 1400.	988.P	62.24	89.60	4580.	57.5
1984	Merrimac Mill Diversion Dam (ruins)				62.07	89.77	4565.	57.9
1985	Altitude contour				62.02	89.82	4560.	57.9
1986	Merrimac Mill Site				61.60	90.24	4550.	57.7
1987	Altitude contour				60.53	91.31	4520.	57.4
1988	Vivian Mill Diversion Dam (ruins)				60.12	91.72	4510.	57.2
1989	Vivian Mill Site				59.85	91.99	4505.	57.1
1990	Santiago Mill Diversion Dam (ruins)				59.64	92.20	4500.	57.0
1991	Santiago Mill Site				59.28	92.56	4490.	56.9
1992	Whirlpool				59.04	92.80	4485.	56.8
1993	Altitude contour				58.85	92.99	4480.	56.8
1994	Eureka Mill Diversion Dam				57.67	94.17	4450.	56.4
1995	Eureka Mill Site (ruins)				57.39	94.45	4445.	56.3
1996	Altitude contour				57.27	94.57	4440.	56.2
1997	River touring take-out (left bank)				56.70	95.14	4420.	56.1
1998	Rose Ditch (left bank)				56.67	95.17	4420.	56.1
1999	Dayton Town (Rose) Ditch Diversion Dam				56.65	95.19	4420.	5.61
2000	Hackett Canyon				56.40	95.44	4410.	56.1
2001	Altitude contour				56.05	95.79	4400.	56.0
2002	Franklin Mill Site				55.70	96.14	4395.	55.8
2003	Randall (Dayton Ditch Co.) Diversion Dam				55.05	96.79	4380.	55.6
2004	Fish and Barrett Diversion Dam				54.15	97.69	4360.	55.3
2005	Woodworth Mill Site							
2006	Altitude contour				54.10	97.74	4360.	55.2
2007	Baroni Diversion Dam				53.20	98.64	4350.	54.8
2008	Dayton bridge Carson River at Dayton Bridge Diversion Pump (left bank) River touring take-out Rose Ditch return Fish and Barrett Ditch Return	NDEP	N310022		52.80	99.04	4350.	54.6
2009	Ghislieri Diversion Dam				52.38	99.46	4345.	54.4
2010	Upper Cardelli and Rock Point Ditch Diversion Dam				52.23	99.61	4345.	54.4
2011	Rock Point Mill Site							

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
2012	Altitude contour				51.61	100.23	4320.	54.3
2013	Gee Ditch Diversion (right bank)				51.41	100.43	4320.	54.2
2014	Baroni and Ghislieri Ditch Return							
2015	Altitude contour				49.55	102.29	4300.	53.4
2016	Carson River at Altran Ranch Corrals	NDEP	N310157					
2017	Gee Ditch Return (right bank)				46.55	105.29	4285.	52.0
2018	Carson River at Altran Ranch Irrigation Return	NDEP	N310168					
2019	Altitude contour Koch Ditch Diversion Dam Koch Ditch (left bank)				45.15	106.69	4280.	51.4
2020	Diversion Dam (right bank)				42.14	109.70	4265.	50.1
2021	Road bridge				41.54	110.30	4260.	49.9
2022	Unnamed return (right bank)				40.83	111.01	4255.	49.6
2023	Carson River above Koch Ditch Return (left bank)				40.12	111.72	4250.	49.3
2024	Koch Return at Carson River	NDEP	N310158				4250.	
2025	Koch Ditch at mouth							
2026	Carson River below Koch Ditch Return (left bank)				40.12	111.72	4250.	49.3
2027	Altitude contour Houghman and Howard Ditch Diversion Dam				37.91	113.93	4240.	48.4
2028	Houghman and Howard South Side (right bank) Houghman and Howard North Side (left bank)							
2029	Carson River below Table Mountain Dam	NDEP	N310169		37.90	113.94	4240.	48.4
2030	Road bridge				36.09	115.75	4230.	47.8
2031	Houghman and Howard South Side Return (right bank)							
2032	Houghman and Howard North Side Return (left bank)							
2033	Bull Canyon Return (right bank)				30.88	120.96	4210.	45.9
2034	Buckland Ditch Diversion Dam Carson River at Buckland Diversion	NDEP	N310159		30.87	120.97	4210.	45.9
2035	Carson River near Fort Churchill	USGS	10312000	1450.P	30.82	121.02	4214.70P	45.8
2036	Altitude contour				28.51	123.33	4200.	45.1
2037	Carson River above Adrian Valley Tributary Return (right bank)				28.30	123.54	4200.	45.0

SUPPLEMENTAL DATA A.- Physiographic information for the Truckee and Carson River basins--Continued

KEY NUMBER	SITE	HYDROLOGIC DATA COLLECTION		DRAINAGE AREA (SQ MI)	RIVER MILES		ALTITUDE (FT ABOVE) SEA (LEVEL)	AVERAGE SLOPE (FT/MI)
		AGENCY	AGENCY SITE NUMBER		ABOVE MOUTH	BELOW SOURCE		
2038	Adrian Valley Tributary near Wabuska, NV	USGS	10312012	5.75			4560.	
2039	Adrian Valley Tributary near Weeks, NV	USGS	10312015	.12			4580.	
2040	Adrian Valley Tributary at mouth							
2041	Carson River below Adrian Valley Tributary Return (right bank)				28.30	123.54	4200.	45.0
2042	Sierra Pacific Railroad bridge				27.51	124.33	4195.	44.8
2043	Fort Churchill (ruins)				27.10	124.74	4195.	44.6
2044	Highway 95A bridge Carson River at Weeks	NDEP	N310016		25.86	125.98	4190.	44.2
2045	Altitude contour				23.50	128.34	4180.	43.5
2046	Carson River above Buckland Ditch Return (left bank)				21.00	130.84	4170.	42.7
2047	Buckland Ditch near Fort Churchill	USGS	10311900				4220.P	
2048	Buckland Ditch at mouth							
2049	Carson River below Buckland Ditch Return (left bank)				21.00	130.84	4170.	42.7
2050	Altitude contour				18.84	133.00	4160.	42.1
2051	Lake Lahontan at Carson River mouth	NDEP	N310017				4160.	
2052	Lahontan Reservoir Tributary near Silver Springs (Crest-stage gage)	USGS	10312050	4.39			4500.	
2053	Lake Lahontan at Silver Springs	NDEP	N310018				4160.	
2054	Lake Lahontan at Narrows	NDEP LE	N310019 LR-1				4160.	
2055	Lahontan Dam (Dam Crest)			1950.P	0.00	151.84	4160.	36.9
2056	Lahontan Reservoir near Fallon, NV	USGS	10312100					
2057	Lake Lahontan at Dam (Stream bottom)	NDEP LE	N310020 LR-2					
2058	Carson River below Lahontan Reservoir near Fallon	USGS	10312150	1800.55		-1.16	4040.P	
2059	Carson River Diversion Dam					-4.73		
2060	Stillwater Diversion Canal near Fallon	USGS	10312210				3920.	
2061	Stillwater Slough Cutoff Drain near Fallon	USGS	10312220				3880.	
2062	Paiute Diversion Drain near Stillwater	USGS	10312240				3890.	
2063	Indian Lake Canal near Fallon	USGS	10312260				3920.	
2064	Indian Lake Canal below East Lake	USGS	10312265				3890.	
2065	Paiute Drain at Wildlife Entrance near Stillwater, NV	USGS	10312270				3890.	
2066	Carson River below Fallon	USGS	10312280			-33.76	3880.P	

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.: Key cross-referencing entries to those in Supplemental Data A.

Site name: Site name in Supplemental Data A. This may not agree with the parent agency's formal site name.

State: CA, California; NV, Nevada. Number refers to county or area designation within state as follows: 001, Churchill; 003, Alpine; 005, Douglas; 017, Eldorado; 019, Lyon; 029, Storey; 031, Washoe; 057, Nevada; 061, Placer; 091, Sierra; 510, Carson City.

Landline location: Locations are given to nearest quarter of quarter section where known. For example, SESW28 08N21E is the southeast quarter of the southwest quarter of section 28, township 8 north, range 21 east; all locations are referenced to the Mt. Diablo baseline and meridian.

Latitude/longitude: Given as degrees-minutes-seconds.

Stream order: Main stems of the Truckee and Carson Rivers are 1, tributaries are 2, stream-order number increases with each successive tributary.

River mile: Main stem Truckee River, miles above Marble Bluff Dam; tributaries, miles above mouth; Truckee Canal, miles above Lahontan Reservoir; main stem Carson River, miles above Lahontan Dam; digitized from orthophotoquads available in 1979.

Altitude in feet above sea level: Approximate altitude of water surface at an average streamflow; for most sites interpolated from topographic maps, at selected gages determined from gage datum for average discharge for period of record.

Drainage area in square miles: Digitized from available topographic maps (1979).

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
1	Lake Tahoe at Tahoe City	CA 061	NENE05 15N17E	391051/1200706	1	116.27	6240.00	505.69
4	Truckee River at Tahoe City	CA 061	NENW07 15N01E	390959/1200836	1	116.20	6216.59	506.84
9	Egg Site, CAL-GAS (right bank)	CA 061	NENW11 15N16E	391000/1201055	1	113.90	6200.00	.00
16	Upper Bear Creek at bridge, below Alpine Meadows	CA 061	SWSE05 15N16E	391018/1201411	2	.00	6720.00	.00
17	Lower Bear Creek below Alpine Meadows Road	CA 061	NENE04 15N16E	391101/1201238	2	.00	6320.00	.00
18	Bear Creek at mouth	CA 061	NWSW34 16N16E	391126/1201151	2	.00	6200.00	.00

for the Truckee and Carson River basins

Operating agency: Agency or organization with primary responsibility for data. Agencies that report data collected by a different primary agency are shown in parentheses. CDWR, California Department of Water Resources; NDEP, Nevada Division of Environmental Protection; DRI, University of Nevada Desert Research Institute; FWM, U.S. Federal Watermaster, Reno; KE, Kaiser Engineers; MCEE, Frederick R. McLaren Environmental Engineering; UDRR, University of Nevada (Reno) Department of Natural Resources; USGS, U.S. Geological Survey.

Agency site No.: Primary identification number used by the reporting agency or organization.

Operation type: Purpose for which data are collected--AMBMON, monitoring ambient conditions; INTENS, intensive water-quality studies; RECON, reconnaissance studies; RESEAR, research projects.

Type of data: Streamflow--GF, gaging station; LF, low flow; PF, peak flow. Water quality--AG; BM, biologic; CM, common ions (Ca, Mg, Na, K, SO4, CO3, HCO3, NO3, PO4); DM; MM, microbiology; NM, nutrients other than NO3 and PO4; PE, periphyton; PH, phytoplankton; PM, pesticides and (or) organics; SM, sediment; TM, trace metals and minor elements. Bed materials--PB, pesticides and (or) organics; SB, sediment particle size; TB, trace metals and minor elements. Fishery--AF, bioessays.

Collection frequency: A, annual; BW, biweekly; CM, continuous or digital monitor; D, daily; I, intermittent; M, monthly; P, periodic; Q, quarterly.

Current status: As of 1980--A, active; D, discontinued.

Data availability
Computer files: Data bases containing raw data--D, DRI systems; W, WATSTORE (U.S. Geological Survey).

Operating history: Dates are shown as from month/year to month/year. For example, 07/1976-11/1976 indicates data available from July 1976 to November 1976.

Sequence No: Arbitrary designation for downstream order of sites for each river--T, Truckee; C, Carson.

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Data availability Computer files	Operating History			Seq. No.
USGS	10337000		GF	CM	A			00/1900			T0010
CDWR	G71710										T0010
USGS	10337500		GF	CM	A			00/1895-00/1896	00/1900		T0020
CDWR	G71665	RECON	PN	I	D			00/1380-00/1380			T0020
			DW	PR				04/1977-04/1978			T0020
			DW	SP				04/1977-07/1978	05/1971-05/1971		T0020
			CW	SP				04/1977-07/1978	05/1971-10/1971		T0020
			NW	BM				06/1977-07/1978			T0020
			NW	M				02/1977-05/1977			T0020
			CW	I				05/1971-05/1971	09/1977-09/1977		T0020
			CW	M				02/1978-05/1978	02/1977-08/1977		T0020
DRI	T26	AMBMON	CW	M	A			01/1968			T0020
MCEE	R-1	INTENS	CW	W	D	MEE7701		07/1976-11/1976			T0020
			NW	W	D			07/1976-11/1976			T0020
			TW	W	D			07/1976-11/1976			T0020
			MW	W	D			07/1976-11/1976			T0020
			DW	W	D			07/1976-11/1976			T0020
			SW	W	D			07/1976-11/1976			T0020
			BW	W	D			07/1976-11/1976			T0020
			AG	M	D	MEE7801		09/1976-11/1976			T0020
KE	S1	INTENS	CW	W	D	KEN7302		08/1972-10/1972			T0020
			MW	W	D			08/1972-10/1972			T0020
			NW	W	D			08/1972-10/1972			T0020
			DW	W	D			08/1972-10/1972			T0020
			IB	M	D			07/1972-10/1972			T0020
			PE	M	D			07/1972-10/1972			T0020
			PH	M	D			08/1972-10/1972			T0020
USGS											T0030
UDRR	28	RESEAR	SW	M	D	BJC7802		08/1972-06/1975			T0040
			NW	M	D			08/1972-06/1975			T0040
			TW	M	D			08/1972-05/1973			T0040
UDRR	27	RESEAR	SW	M	D	BJC7802		05/1971-06/1975	08/1970-11/1970	12/1970-04/1971	T0050
			NW	M	D			06/1971-06/1975	08/1970-04/1971		T0050
			TW	M	D			06/1971-05/1973	08/1970-04/1971		T0050
			SW	W	D			11/1970-11/1970			T0050
MCEE	I-2	INTENS	CW	W	D	MEE7701		07/1976-11/1976	09/1977-10/1977		T0060
			NW	W	D	MEE7801		07/1976-11/1976	09/1977-10/1977		T0060
			TW	W	D			07/1976-11/1976	09/1977-10/1977		T0060
			MW	W	D			07/1976-11/1976	09/1977-10/1977		T0060
			DW	W	D			07/1976-11/1976			T0060
			SW	W	D			07/1976-11/1976	09/1977-10/1977		T0060
			AG	M	D			08/1976-11/1976			T0060
			BW	W	D				09/1977-10/1977		T0060

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
22	Truckee River 100 yards above Cinder Cone Spring	CA 061	NWNW34 16N16E	391143/1201150	1	11.52	6200.00	.00
23	Wright (Cinder Cone) Spring #1	CA 061	NWNW34 16N16E	391146/1201145	2	.00	6200.00	.00
24	Truckee River 25 yards below Cinder Cone Spring	CA 061	NWNW34 16N16E	391144/1201151	1	.00	6200.00	.00
25	Truckee River 100 yards below Cinder Cone Spring	CA 061	NWNW34 16N16E	391144/1201152	1	.00	6200.00	.00
29	Wright (Cinder Cone) Spring #2	CA 061	SWSW27 16N16E	391200/1201149	2	.00	6240.00	.00
30	Cinder Cone Spring #2	CA 061	SESE28 16N16E	391208/1201155	2	.00	6120.00	.00
34	Truckee River above Squaw Creek	CA 061	NENE28 16N16E	391242/1201155	1	110.16	6080.00	.00
36	Upper Squaw Creek 0.25 mile below Ice Rink	CA 061	NENW32 16N16E	391151/1201341	2	.00	6195.00	.00
37	Squaw Creek at Squaw Valley Road at Squaw Valley	CA 061	SENW28 16N16E	391225/1201232	2	.00	6200.00	.00
38	Squaw Creek at Highway 89 at Squaw Valley	CA 061	NENE28 16N16E	391242/1201157	2	110.12	6080.00	.00
46	Truckee River at Silver Creek Campground	CA 061	SENE21 16N16E	391327/1201203	1	109.18	6080.00	.00

for the Truckee and Carson River basins--Continued

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability: Pub. No.	Data availability: Computer files	Operating History		Seq. No.
MCEE	S-1	INTENS	CW	M	D	MEE7701		07/1976-11/1976	09/1977-10/1977	T0070
			NW	M	D	MEE7801		07/1976-11/1976	09/1977-10/1977	T0070
			TW	M	D			07/1976-11/1976	09/1977-10/1977	T0070
			SW	M	D			07/1976-11/1976	09/1977-10/1977	T0070
			MW	M	D				09/1977-10/1977	T0070
			BW	M	D				09/1977-10/1977	T0070
DRI	T103	AMBMON	CW	M	A			11/1968		T0080
MCEE	I-1	INTENS	CW	M	D	MEE7701		07/1976-11/1976	09/1977-10/1977	T0080
			NW	M	D	MEE7801		07/1976-11/1976	09/1977-10/1977	T0080
			TW	M	D			07/1976-11/1976	09/1977-10/1977	T0080
			MW	M	D			07/1976-11/1976	09/1977-10/1977	T0080
	DW	M	D				07/1976-11/1976		T0080	
			SW	M	D			07/1976-11/1976	09/1977-10/1977	T0080
			AG	M	D			08/1976-11/1976		T0080
			BW	M	D				09/1977-10/1977	T0080
MCEE	S-3	INTENS	CW	M	D	MEE7701		07/1976-11/1976		T0090
			NW	M	D			07/1976-11/1976		T0090
			TW	M	D			07/1976-11/1976		T0090
			SW	M	D			07/1976-11/1976		T0090
MCEE	S-2	INTENS	CW	M	D	MEE7701		07/1976-11/1976	09/1977-10/1977	T0100
			NW	M	D	MEE7801		07/1976-11/1976	09/1977-10/1977	T0100
			TW	M	D			07/1976-11/1976	09/1977-10/1977	T0100
			SW	M	D				09/1977-10/1977	T0100
			MW	M	D				09/1977-10/1977	T0100
			BW	M	D				09/1977-10/1977	T0100
DRI	T104	AMBMON	CW	M	A			11/1968		T0110
MCEE	I-1A	INTENS	CW	M	D	MEE7701		07/1976-11/1976	09/1977-10/1977	T0120
			NW	M	D	MEE7801		07/1976-11/1976	09/1977-10/1977	T0120
			TW	M	D			07/1976-11/1976	09/1977-10/1977	T0120
			MW	M	D			07/1976-11/1976	09/1977-10/1977	T0120
			DW	M	D			07/1976-11/1976	10/1977	T0120
			SW	M	D			07/1976-11/1976	09/1977-10/1977	T0120
DRI	T27	AMBMON	CW	M	A			01/1968		T0130
UDRR	25	RESEAR	SW	M	D	BJC7802		08/1972-06/1975		T0140
			NW	M	D			08/1972-06/1975		T0140
			TW	M	D			08/1972-06/1975		T0140
USGS	1033850									T0150
USGS	1033855									T0160
UDRR	26	RESEAR	SW	M	D	BJC7802		08/1970-11/1970	12/1970-06/1975	T0160
			NW	M	D			08/1970-06/1970	(-backwards)	T0160
			TW	M	D			08/1970-05/1973		T0160
			SW	M	D			11/1970-11/1970		T0160
CDWR	G7162.01		TW	I				08/1956-08/1956		T0160
			CW	I				08/1956-08/1956		T0160
MCEE	I-3	INTENS	CW	M	D	MEE7701		07/1976-11/1976	09/1977-10/1977	T0160
			NW	M	D	MEE7801		07/1976-11/1976	09/1977-10/1977	T0160
			TW	M	D			07/1976-11/1976	09/1977-10/1977	T0160
			MW	M	D			07/1976-11/1976	09/1977-10/1977	T0160
			DW	M	D			07/1976-11/1976		T0160
			SW	M	D			07/1976-11/1976	09/1977-10/1977	T0160
			AG	M	D			07/1976-11/1976		T0160
MCEE	R-2	INTENS	CW	M	D	MEE7701		07/1976-11/1976	09/1977-10/1977	T0170
			NW	M	D	MEE7801		07/1976-11/1976	09/1977-10/1977	T0170
			TW	M	D			07/1976-11/1976	09/1977-10/1977	T0170
			MW	M	D			07/1976-11/1976	09/1977-10/1977	T0170
			DW	M	D			07/1976-11/1976		T0170
			SW	M	D			07/1976-11/1976	09/1977-10/1977	T0170
			BW	M	D			07/1976-11/1976		T0170
			AG	M	D			07/1976-11/1976		T0170
KE	S2	INTENS	CW	M	D	KEN7302		08/1972-10/1972		T0170
			NW	M	D			08/1972-10/1972		T0170
			MW	BW	D			08/1972-10/1972		T0170
			DW	M	D			08/1972-10/1972		T0170
			PH	M	D			08/1972-10/1972		T0170

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
53	Pole Creek above Highway 89	CA 061	SWNE16 16N16E	391411/1201226	2	108.12	6020.00	.00
61	Deep Creek at Highway 89	CA 061	SESW04 16N16E	391529/1201238	2	.00	5990.00	.00
70	Truckee River tributary near Truckee	CA 061	SWNE33 17N16E	391648/1201221	2	.00	5920.00	1.11
73	Truckee River near Truckee	CA 061	SWNE28 17N16E	391747/1201218	1	103.62	5880.00	553.00
74	Truckee River at Granite Flet Campground	CA 061	NWNE28 17N16E	391756/1201213	1	103.00	5880.00	552.P
76	Truckee River above Donner Creek	CA 061	NWNE21 17N16E	391843/1201214	1	102.50	5880.00	.00
77	Truckee River above Donner Creek near Truckee	CA 057	SESE16 17N16E	391858/1201200	1	102.12	5860.00	555.00
79	Billy Mack Creek near Norden	CA 057	NWSW14 17N15E	391913/1201724	3	.00	5940.00	4.96
81	Negro Canyon Creek near Norden	CA 057	SENW14 17N15E	391931/1201707	3	.00	5940.00	1.71
82	Lakeview Canyon Creek near Norden	CA 057	SESW14 17N15E	391901/1201706	3	.00	5940.00	1.75
84	Donner Creek at Donner Lake near Truckee	CA 057	SWNW17 17N16E	391924/1201401	2	.00	5930.00	14.30
87	Cold Creek at Irrigation Outlet	CA 057	NWNE11 12N18E	385419/1195723	4	.00	6320.00	.00
88	Cold Creek at Donner Creek, near Truckee	CA 057	SWNE17 17N16E	391924/1201325	3	.00	5910.00	.00
92	Donner Creek below Highwey 89, near Truckee	CA 057	NWSE16 17N16E	391914/1201224	2	.00	5840.00	.00
93	Donner Creek neer Truckee	CA 057	SWSE16 17N16E	391906/1201219	2	.00	5820.00	29.20
94	Donner Creek et West River Road	CA 057	SESE16 17N16E	391859/1201202	2	.00	5820.00	.00
95	Donner Creek at mouth, near Truckee	CA 057	SESE16 17N16E	391859/1201202	2	.00	5820.00	.00
97	Truckee River west of Truckee	CA 057	SESE16 17N16E	391902/1201154	1	101.99	5840.00	.00

for the Truckee and Carson River basins--Continued

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Computer files	Operating History			Seq. No.
UDRR	24	RESEAR	SW	M	D	BJC7802		02/1973-05/1974	08/1970-11/1970	07/1971-12/1972	T0180
			NW	M	D			02/1973-07/1975	08/1970-12/1972		T0180
			TW	M	D			02/1973-05/1973	08/1970-12/1972		T0180
			SW	W	D			05/1975-07/1975	11/1970-07/1971		T0180
UDRR	23	RESEAR	SW	M	D	BJC7802		04/1973-05/1974	08/1970-11/1970	12/1970-02/1973	T0190
			NW	M	D			04/1973-07/1975	08/1970-02/1973		T0190
			TW	I	D			04/1973-05/1973	08/1970-02/1973		T0190
			SW	W	D			05/1975-07/1975	11/1970-11/1970		T0190
USGS	10337900		PF	A				00/1963			T0200
CDWR	G71610										T0200
USGS	10338000		GF	M	D		W	00/1944-00/1961			T0210
CDWR	G71600		CW	R				09/1963-09/1966	05/1952-09/1961		T0210
			TW	R				05/1952-09/1961			T0210
			TW	I				07/1950-07/1950			T0210
			CW	M				01/1967-07/1967	07/1963-11/1966		T0210
			CW	M				04/1951-10/1951	05/1952-12/1953	04/1954-11/1954	T0210
			CW	I				07/1950-07/1950			T0210
			CW	M				05/1955-11/1955	05/1956-10/1956	04/1957-10/1957	T0210
								09/1959-12/1959	04/1960-07/1963		T0210
KE	S3	INTENS	CW	W	D			08/1972-10/1972			T0210
			MW	W	D			08/1972-10/1972			T0210
			NW	BW	D			08/1972-10/1972			T0210
			DW	BW	D			08/1972-10/1972			T0210
			PH	M	D			08/1972-10/1972			T0210
MCEE	R-3	INTENS	CW	W	D	MEE7701		07/1976-11/1976	09/1977-10/1977		T0220
			NW	W	D	MEE7801		07/1976-11/1976	09/1977-10/1977		T0220
			TW	W	D			07/1976-11/1976	09/1977-10/1977		T0220
			MW	W	D			07/1976-11/1976	09/1977-10/1977		T0220
			SW	W	D			07/1976-11/1976	09/1977-10/1977		T0220
			BW	BW	D			07/1976-11/1976			T0220
			AG	M	D			09/1976-11/1976			T0220
DRI	T32	AMBMON	CW	M	A			01/1968			T0230
USGS	10338010										T0240
USGS	10338100										T0250
USGS	10338200										T0260
USGS	10338300										T0270
USGS	10338500		GF	M	A		W	00/1909-00/1910	00/1929-00/1953	00/1955	T0280
CDWR	G71565		CW	M				07/1969-09/1969			T0280
			NW	I				06/1967-06/1967			T0280
CDWR	G73833.1		TW	I				08/1956-08/1956			T0290
			CW	I				08/1956-08/1956			T0290
FWM	01	WATMAN	GF	W	A						T0300
CDWR	G71530.10		TW	I				08/1956-08/1956			T0310
USGS	10339000		GF	CM	D		W	00/1902-00/1915	00/1928-00/1943		T0320
CDWR	G71530							00/1902-00/1915			T0320
DRI	T33	AMBMON	CW	M	A			01/1968			T0330
USGS	10339003	RECON	PW	I	D		W	02/1980-03/1980			T0340
			PB	I	D			02/1980-03/1980			T0340
MCEE	I-4	INTENS	CW	W	D	MEE7701		07/1976-11/1976	09/1977-10/1977		T0340
			NW	W	D	MEE7801		07/1976-11/1976	09/1977-10/1977		T0340
			TW	W	D			07/1976-11/1976	09/1977-10/1977		T0340
			MW	W	D			07/1976-11/1976	09/1977-10/1977		T0340
			DW	W	D			07/1976-11/1976			T0340
			SW	W	D			07/1976-11/1976	09/1977-10/1977		T0340
			AG	M	D			08/1976-11/1976			T0340
MCEE	R-3.5	INTENS	CW	W	D	MEE7701		09/1977-10/1977			T0350
			NW	W	D	MEE7801		09/1977-10/1977			T0350

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
100	Truckee River at Highway 267, at Truckee	CA 057	NENE15 17N16E	391936/1201100	1	100.86	5783.00	.00
103	Truckee River upstream from Sewage Treatment Pilot Plant	CA 057	SESE11 17N16E	391954/1200955	1	99.84	5741.00	.00
106	Truckee Trout Creek T-1	CA 057	NWSE06 17N16E	392053/1201431	2	.00	6520.00	.00
107	Truckee Trout Creek tributery at Zermatt Creek	CA 057	NESE06 17N16E	392100/1201415	2	.00	6460.00	.00
108	Truckee Trout Creek before golf course	CA 057	NESE06 17N16E	392105/1201407	2	.00	6440.00	.00
109	Truckee Trout Creek below golf course	CA 057	NESW05 17N16E	392058/1201347	2	.00	6400.00	.00
110	Truckee Trout Creek below Tahoe-Donner property line	CA 057	SWNE09 17N16E	392016/1201217	2	.00	6100.00	.00
111	Truckee Trout Creek above Highway I-80	CA 057	SWSE10 17N16E	391951/1201112	2	.00	5860.00	.00
112	Trout Creek at Truckee	CA 057	SESE10 17N16E	391947/1201104	2	.00	5840.00	.00
113	Truckee Trout Creek at mouth	CA 057	SESE11 17N16E	391956/1200955	2	.00	5740.00	.00
119	Truckee River flume site near Polaris	CA 057	NWSW07 17N17E	392013/1200819	1	.00	5679.00	.00
121	Truckee River above Martis Creek	CA 057	SWSW05 17N17E	392051/1200721	1	96.93	5641.00	.00
122	Middle Martis Creek near Truckee	CA 061	SWNW33 17N17E	391655/1200612	3	.00	6220.00	2.83
123	Martis Creek at Highway 267, near Truckee	CA 061	SWSW20 17N17E	391808/1200713	2	.00	5820.00	25.80
124	Martis Creek below Highway 267	CA 061	SWSW20 17N17E	391811/1200710	2	.00	5820.00	.00
125	Martis Creek Lake(?) near Truckee	CA 057	NENW17 17N17E	391938/1200650	2	.00	5740.00	39.60
126	Martis Creek below Martis Reservoir	CA 057	NENW17 17N17E	391939/1200653	2	.00	5740.00	.00
127	Martis Creek near Truckee	CA 057	NENW17 17N17E	391942/1200659	2	.00	5740.00	39.90
129	Martis Creek near mouth at Truckee River	CA 057	NESW05 17N17E	392056/1200702	2	.00	5680.00	.00
130	Martis Creek at mouth	CA 057	NESW05 17N17E	392100/1200702	2	.00	5680.00	.00

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Data availability Computer files	Operating History		Seq. No.
USGS	10339010	INTENS	TT	I	D			10/1980		T0360
KE	S4	INTENS	CW	BW	D	KEN7302		08/1972-10/1972		T0370
			MW	BW	D			08/1972-10/1972		T0370
			NW	BW	D			08/1972-10/1972		T0370
			DW	BW	D			08/1972-10/1972		T0370
			IB	M	D			07/1972-10/1972		T0370
			PE	M	D			07/1972-10/1972		T0370
			PH	M	D			08/1972-10/1972		T0370
UDRR	17	RESEAR	SW	A	D	BJC7802		06/1973-06/1974		T0380
			MW	A	D			06/1973-07/1974		T0380
UDRR	18	RESEAR	SW	M	D	BJC7802		07/1973		T0390
			MW	SP	D			10/1973		T0390
UDRR	20	RESEAR	SW	BM	D	BJC7802		07/1973-07/1974		T0400
			MW	SP	D			06/1973-08/1974		T0400
UDRR	19	RESEAR	SW	M	D	BJC7802		06/1973-03/1975		T0410
			MW	SP	D			06/1973-03/1975		T0410
UDRR	22	RESEAR	SW	M	D	BJC7802		07/1973-03/1975		T0420
			MW	M	D			10/1973-03/1975		T0420
UDRR	16	RESEAR	SW	M	D	BJC7802		02/1971-06/1975		T0430
			MW	M	D			02/1971-06/1975		T0430
			TW	M	D			02/1971-05/1973		T0430
CDWR	G71522.01		TW	I				07/1950-07/1950	08/1956-08/1956	T0440
UDRR	21	RESEAR	SW	M	D	BJC7802		06/1973-03/1975		T0450
			MW	SD	D			06/1973-03/1975		T0450
MCEE	R-4	INTENS	CW	W	D	MEE7701		07/1976-11/1976	09/1977-10/1977	T0460
			NW	W	D	MEE7801		07/1976-11/1976	09/1977-10/1977	T0460
			TW	W	D			07/1976-11/1976	09/1977-10/1977	T0460
			MW	W	D			07/1976-11/1976	09/1977-10/1977	T0460
			DW	W	D			07/1976-11/1976		T0460
			SW	W	D			07/1976-11/1976	09/1977-10/1977	T0460
			BW	BW	D			07/1976-11/1976	09/1977-10/1977	T0460
			AG	M	D			08/1976-11/1976		T0460
DRI	T34	AMBMON	CW	M	A			11/1967		T0470
USGS	10339200		PF		A			00/1965		T0480
CDWR	G71505									T0480
USGS	10339250									T0490
CDWR	G71500.01		TW	I				08/1956-08/1956		T0490
DRI	T177	AMBMON	CW	M	A			03/1973		T0500
USGS	10339380									T0510
DRI	T12	AMBMON	CW	M	D			11/1967-05/1978		T0520
USGS	10339400		GF	CM	A		W	00/1958		T0530
CDWR	G71490									T0530
USGS	10339405	RECON	PW	I	D		W	03/1980-03/1980		T0540
MCEE	S-4	INTENS	CW	W	D	MEE7701		07/1976-11/1976		T0540
			NW	W	D			07/1976-11/1976		T0540
			TW	W	D			07/1976-11/1976		T0540
			MW	W	D			07/1976-11/1976		T0540
			SW	W	D			07/1976-11/1976		T0540
MCEE	I-5	INTENS	CW	W	D	MEE7701		07/1976-11/1976	09/1977-10/1977	T0550
			NW	W	D	MEE7801		07/1976-11/1976	09/1977-10/1977	T0550
			TW	W	D			07/1976-11/1976	09/1977-10/1977	T0550
			MW	W	D			07/1976-11/1976	09/1977-10/1977	T0550
			DW	W	D			07/1976-11/1976		T0550
			SW	W	D			07/1976-11/1976	09/1977-10/1977	T0550
			AG	M	D			08/1976-11/1976		T0550
			BW	W	D				09/1977-10/1977	T0550

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
133	Truckee River above old U.S. 40 bridge below Truckee	CA 057	NESW05 17N17E	392111/1200717	1	96.17	5660.00	.00
141	South Fork Prosser Creek near Truckee	CA 057	SESW25 18N15E	392234/1201547	3	.00	6520.00	6.32
142	Prosser Creek at Hobart Mills	CA 057	NENE21 18N16E	392402/1201156	2	.00	5880.00	27.60
143	Prosser Creek	CA 057	SWNE22 18N16E	392344/1201106	2	.00	5760.00	.00
144	Prosser Creek above Alder Creek	CA 057	NESW25 18N16E	392249/1200913	2	.00	5680.00	.00
146	Alder Creek tributary at Slalom Way	CA 057	NWNE01 17N15E	392120/1201531	4	.00	6730.00	.00
147	Alder Creek below Ski Bowl at Slalom Way	CA 057	NWNE01 17N15E	392120/1201531	4	.00	6730.00	.00
148	Alder Creek above Tahoe-Donner 0.5 mile above Slalom Way	CA 057	NENE01 17N15E	392125/1201523	4	.00	6680.00	.00
149	Alder Creek tributary below Equestrian Way	CA 057	SWSW31 18N16E	392133/1201459	3	.00	6560.00	.00
150	Alder Creek below Fjord Road	CA 057	SESW31 18N16E	392139/1201447	3	.00	6520.00	.00
151	Alder Creek at campground	CA 057	SENE31 18N16E	392208/1201406	3	.00	6300.00	.00
152	Alder Creek near Truckee	CA 057	SENE34 18N16E	392207/1201054	3	.00	5920.00	7.33
153	Alder Creek at Highway 89	CA 057	SENE34 18N16E	392206/1201100	3	.00	5820.00	.00
154	Alder Creek at mouth, near Truckee	CA 057	NESW25 18N16E	392243/1200914	3	.00	5840.00	.00
157	Prosser Creek near Truckee	CA 057	NESW25 18N16E	392243/1200908	2	.00	5680.00	47.20
159	Prosser Creek at Highway 89	CA 057	NWSE22 18N16E	392339/1201102	2	.00	5760.00	.00
160	Prosser Creek above Prosser Creek Reservoir	CA 057	NESE22 18N16E	392333/1201057	2	.00	5760.00	.00
161	Prosser Creek Reservoir near Boca	CA 057	NWSW30 18N17E	392242/1200825	2	.00	5660.P	50.30
162	Prosser Creek below Prosser Creek Dam near Truckee	CA 057	NWNE31 18N17E	392222/1200756	2	.00	5670.00	52.90
164	Prosser Creek at mouth	CA 057	NENW32 18N17E	392214/120658	2	.00	5580.00	.00
169	Truckee River at Highway I-80 above Little Truckee River, near Truckee	CA 057	SWSW28 18N17E	392237/1200610	1	92.35	5540.00	.00
170	Truckee River above Little Truckee River	CA 057	SWNE28 18N17E	392303/1200537	1	91.60	5540.00	.00

for the Truckee and Carson River basins--Continued

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Computer files	Operating History	Seq. No.
USGS	10339498	INTENS	TT	I	D			10/1980	T0560
NCEE	R-5	INTENS	CW	W	D	NEE7701		07/1976-11/1976 09/1977-10/1977	T0560
			NW	W	D	NEE7801		07/1976-11/1976 09/1977-10/1977	T0560
			TW	W	D			07/1976-11/1976 09/1977-10/1977	T0560
			MW	W	D			07/1976-11/1976 09/1977-10/1977	T0560
			DW	W	D			07/1976-11/1976	T0560
			SW	W	D			07/1976-11/1976 09/1977-10/1977	T0560
			BW	BW	D			07/1976-11/1976 09/1977-10/1977	T0560
			AG	M	D			09/1976-11/1976	T0560
DRI	T179	AMBMON	CW	M	A			05/1973	T0560
USGS	10339500		GF	CM	D		W	00/1909-00/1910	T0570
CDWR	G71430								T0570
USGS	10339700		GF	CM	D		W	00/1958-00/1963	T0580
CDWR	G71380								T0580
UDRR	8	RESEAR	SW	M	D	BJC7802		08/1970-06/1975	T0590
			NW	M	D			08/1970-06/1975	T0590
			TW	M	D			08/1970-05/1973	T0590
CDWR	G71355.01		TW	I				08/1956-08/1956	T0600
UDRR	13	RESEAR	SW	M	D	BJC7802		06/1973-10/1974	T0610
			NW	SP	D			06/1973-10/1974	T0610
UDRR	14	RESEAR	SW	M	D	BJC7802		06/1973-03/1975	T0620
			NW	SP	D			06/1973-03/1975	T0620
UDRR	15	RESEAR	SW	M	D	BJC7802		06/1973-01/1975	T0630
			NW	SP	D			06/1973-01/1975	T0630
UDRR	10	RESEAR	SW	M	D	BJC7802		07/1973-01/1975	T0640
			NW	SP	D			06/1973-01/1975	T0640
UDRR	12	RESEAR	SW	M	D	BJC7802		06/1973-03/1975	T0650
			NW	SP	D			06/1973-03/1975	T0650
UDRR	11	RESEAR	SW	M	D	BJC7802		06/1973-05/1976	T0660
			NW	SP	D			06/1973-05/1976	T0660
USGS	10339900		GF	CM	A		W	00/1958-00/1969 00/1970	T0670
CDWR	G71340								T0670
FWM	02	WATMAN	GF	W	A				T0680
CDWR	G71300.01		TW	I				08/1956-08/1957	T0690
USGS	10340000		GF	CM	D		W	00/1903-00/1904 00/1907-00/1912	T0700
CDWR	G71295								T0700
FWM	03	WATMAN	GF	W	A				T0710
DRI	T35	AMBMON	CW	M	A			01/1968	T0720
USGS	10340300		GF	CM	A		W	00/1963	T0730
CDWR	G71272								T0730
USGS	10340500		GF	CM	A		W	00/1902-00/1903 00/1942	T0740
CDWR	G71260								T0740
NCEE	I-6	INTENS	CW	W	D	NEE7701		07/1976-11/1976 09/1977-10/1977	T0750
			NW	W	D			07/1976-11/1976 09/1977-10/1977	T0750
			TW	W	D			07/1976-11/1976 09/1977-10/1977	T0750
			MW	W	D			07/1976-11/1976 09/1977-10/1977	T0750
			DW	W	D			07/1976-11/1976	T0750
			SW	W	D			07/1976-11/1976 09/1977-10/1977	T0750
			AG	M	D			08/1976-11/1979	T0750
DRI	T36	AMBMON	CW	M	A			11/1967	T0750
USGS	10340900								T0760
CDWR	G71254.01		DW	I				12/1976-12/1976	T0770
			TW	I				12/1976-12/1976	T0770
			NW	I				12/1976-12/1976	T0770
			CW	I				12/1976-12/1976	T0770

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
171	Webber Creek near Truckee	CA 091	SENE28 19N14E	392908/1202417	3	.00	6760.00	15.00
173	Perrazo Creek at Perrazo Canyon Road	CA 091	NENW03 19N14E	392727/1202334	3	.00	6800.00	.00
176	Coldstream Creek at Hennes Pass Road	CA 091	NENE25 19N14E	392915/1202051	3	.00	6560.00	.00
178	Little Truckee River near Truckee	CA 091	NESE17 19N15E	392940/1202000	2	.00	6480.00	33.10
179	Lower Little Truckee River of north Henness Pass Road	CA 091	NESW16 19N15E	392938/1201923	2	.00	6440.00	.00
180	Little Truckee River below Sierra Valley diversion	CA 091	SESE15 19N15E	392932/1201735	2	.00	6400.00	.00
181	Little Truckee River near Hobart Mills	CA 091	NWNE14 19N15E	393005/1201635	2	.00	6310.00	37.10
182	Little Truckee River at Independence Lake Road	CA 091	NENE14 19N15E	393010/1201632	2	.00	6300.00	.00
183	Sierra Valley diversion at Highwey 89	CA 091	SESW11 19N15E	393017/1201653	3	.00	6400.00	.00
185	Independence Lake near dam	CA 057	NWNE03 18N15E	392643/1201750	3	.00	6960.00	.00
186	Independence Lake, North Shore	CA 091	NWSE34 19N15E	392700/1201756	3	.00	6960.00	.00
189	Independence Creek near Truckee	CA 091	SWNW35 19N15E	392715/1201721	3	.00	6940.00	8.10
190	Upper Independence Creek above bridge	CA 091	SENE14 19N15E	393002/1201630	3	.00	6310.00	.00
193	Little Truckee River above Stampede Reservoir, at Highway 89	CA 091	NWSW20 19N16E	392848/1201355	2	.00	6160.00	.00
197	Sagehen Creek near Truckee	CA 057	NENE07 18N16E	392553/1201422	3	.00	6320.00	10.50
198	Sagehen Creek above Highway 89	CA 057	NESW04 18N16E	392609/1201232	3	.00	6140.00	.00
199	Sagehen Creek at Highway 89	CA 057	SWSE04 18N16E	392601/1201221	3	.00	6140.00	.00
204	Merril Creek above Stampede Reservoir	CA 091	SESW09 19N17E	393024/1200548	4	.00	5990.00	.00
207	Davies Creek above Stampede Reservoir	CA 091	SESW09 19N17E	393023/1200552	3	.00	5990.00	.00
209	Stampede Reservoir near Boca	CA 091	NWNW28 19N17E	392825/1200559	2	.00	5680.00	136.00
210	Little Truckee River below Stampede Dam	CA 091	NENW28 19N17E	392822/1200558	2	.00	5800.00	.00
211	Little Truckee River below Stampede Reservoir	CA 091	NWSW28 19N17E	392758/1200612	2	.00	5720.00	.00

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Data availability Computer files	Operating History	Seq. No.
USGS	10341000		GF	CM	D		W	00/1909-00/1910	T0780
CDWR	G72635		F						T0780
			CW					00/1975	T0780
			NW						T0780
			TW						T0780
UDRR	3	RESEAR	SW	BM	D	BJC7802		08/1974-05/1976	T0790
			NW	BM	D			08/1974-05/1976	T0790
UDRR	4	RESEAR	SW	BM	D	BJC7802		08/1974-05/1976	T0800
			NW	BM	D			08/1974-05/1976	T0800
USGS	10341500		GF	CM	D		W	00/1909-00/1910	T0810
CDWR	G72550								T0810
UDRR	2	RESEAR	SW	SM	D	BJC7802		08/1974-05/1976	T0820
			NW	BM	D			08/1974-05/1976	T0820
FWM	06	WATMAN	GF	W	A				T0830
USGS	10342000		GF	CM	A		W	00/1946	T0840
CDWR	G72500								T0840
FWM	07	WATMAN	GF	W	A				T0850
FWM	08	WATMAN	GF	W	A				T0860
CDWR	G7L926.7		CW	I				10/1975	T0870
	017.8								T0870
CDWR	G7L927.0		DW	I				12/1976-12/1976	T0880
	017.9		TW	I				12/1976-12/1976	T0880
			CW	I				12/1976-12/1976	T0880
USGS	10343000		GF	CM	A		W	00/1902-00/1907 00/1909-00/1910 00/1968	T0890
CDWR	G72380		F						T0890
			CW					00/1975	T0890
			NW						T0890
			TW						T0890
UDRR	5	RESEAR	SW	BM	D	BJC7802		08/1974-05/1976	T0890
			NW	BM	D			08/1974-05/1976	T0890
UDRR	6	RESEAR	SW	BM	D	BJC7802		08/1974-05/1976	T0900
			NW	BM	D			08/1974-05/1976	T0900
DRI	T38	AMBMON	CW	M	A			01/1968	T0910
FWM	5	WATMAN	GF	W	A				T0910
USGS	10343500		GF	CM	A		W	00/1953	T0920
CDWR	G72275								T0920
UDRR	7	RESEAR	SW	M	D	BJC7802		08/1970-06/1975	T0930
			NW	M	D			08/1970-06/1975	T0930
			TW	M	D			08/1970-05/1973	T0930
FWM	04	WATMAN	GF	W	A				T0940
DRI	T37	AMBMON	CW	M	A			01/1968	T0940
DRI	T112								T0950
DRI	T113								T0960
USGS	10344300		GF	CM	A		W	00/1969	T0970
CDWR	G72220								T0970
CDWR	G72218.01		NW	I				12/1976-12/1976	T0980
			CW	I				12/1976-12/1976	T0980
FWM	09	WATMAN	GF	W	A				T0990

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
212	Little Truckee River above Boca Reservoir, near Truckee	CA 057	SWSW03 18N17E	392609/1200503	2	.00	5640.00	146.00
213	Little Truckee River at Boca Reservoir	CA 057	NESE09 18N17E	392522/1200508	1	.00	5640.00	.00
215	Boca Reservoir near Truckee	CA 057	NWSE21 18N17E	392335/1200537	2	.00	5640.00	172.00
216	Little Truckee River below Boca Dam, near Truckee	CA 057	NENW28 18N17E	392310/1200540	2	.00	5550.00	173.00
217	Little Truckee River at mouth	CA 057	SWNE28 18N17E	392304/1200537	2	.00	5540.00	.00
221	Truckee River at Boca Bridge, near Truckee	CA 057	NENE28 18N17E	392307/1200512	1	.00	5180.00	.00
225	Truckee River above Juniper Creek, at Hirschdale	CA 057	SWNE34 17N17E	392203/1200434	1	89.40	5420.00	.00
228	Juniper Creek at Hirschdale Road	CA 057	NWSE34 17N17E	392152/1200423	2	.00	5460.00	.00
231	Truckee River near Hirschdale dump	CA 057	SENW35 17N17E	392209/1200333	1	88.35	5420.00	.00
232	Truckee River below Hirschdale dump	CA 057	SENW35 17N17E	392209/1200330	1	88.29	5420.00	.00
238	Gray Creek above mouth, at Hirschdale Road	CA 057	NWNW06 17N18E	392224/1200145	2	.00	5430.00	.00

for the Truckee and Carson River basins--Continued

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Data availability Computer files	Operating History			Seq. No.
USGS	10344400		GF	CM	A		W	00/1903-00/1910	00/1939		T1000
CDWR	G72160		F								T1000
			CW	I				12/1976-12/1976			T1000
			NW	I				12/1976			T1000
			TW					00/1976			T1000
DRI	T106	AMBMON	CW	M	D			07/1969-07/1979			T1000
USGS	10344485	RECON	PW	I	D			00/1380-00/1380			T1010
USGS	10344490		GF	CM	A		W	00/1938			T1020
CDWR	G72110										T1020
USGS	10344500		GF	CM	A		W	00/1890-00/1890	00/1911-00/1915	00/1939	T1030
DRI	T39	AMBMON	CW	M	A			11/1967			T1030
			F								T1030
			CW	I				08/1956-08/1956			T1030
			NW								T1030
			TW								T1030
CDWR	G72100.05		CW	I				08/1956-08/1956			T1030
			NW								T1030
			TW								T1030
			NW	I				12/1976-12/1976			T1030
			CW	I				12/1976-12/1976			T1030
MCEE	I-7	INTENS	CW	W	D	MEE7701		07/1976-11/1976	09/1977-10/1977		T1040
			NW	W	D	MEE7801		07/1976-11/1976	09/1977-10/1977		T1040
			TW	W	D			07/1976-11/1976	09/1977-10/1977		T1040
			MW	W	D			07/1976-11/1976	09/1977-10/1977		T1040
			DW	W	D			07/1976-11/1976			T1040
			SW	W	D			07/1976-11/1976	09/1977-10/1977		T1040
			AG	M	D			08/1976-11/1976			T1040
USGS	10344505	INTENS	TT	I	D			10/1980			T1050
KE	S5	INTENS	CW	BW	D	KEN7302		08/1972-10/1972			T1050
			MW	BW	D			08/1972-10/1972			T1050
			NW	BW	D			08/1972-10/1972			T1050
			DW	BW	D			08/1972-10/1972			T1050
			PH	M	D			08/1972-10/1972			T1050
MCEE	R-6	INTENS	CW	W	D	MEE7701		07/1976-11/1976	09/1977-10/1977		T1050
			NW	W	D	MEE7801		07/1976-11/1976	09/1977-10/1977		T1050
			TW	W	D			07/1976-11/1976	09/1977-10/1977		T1050
			SW	W	D			07/1976-11/1976	09/1977-10/1977		T1050
			BW	BW	D			07/1976-11/1976			T1050
			AG	M	D			09/1976-11/1976			T1050
			MW	W	D				09/1977-10/1977		T1050
CDWR	G71252.01		DW	I				12/1976-12/1976			T1050
			TW	I				12/1976-12/1976			T1050
			NW	I				12/1976-12/1976			T1050
			CW	I				12/1976-12/1976			T1050
DRI	T40	AMBMON	CW	M	D			11/1967-05/1978			T1060
CDWR	G71235.01		TW	I				08/1956-08/1956			T1070
UDRR	64	RESEAR	SW	M	D	BJC7802		08/1970-04/1971	08/1971-06/1975		T1070
			NW	M	D			08/1970-06/1975			T1070
			TW	M	D			08/1970-05/1973			T1070
			SW	M	D			04/1971-08/1971			T1070
USGS	10344992	RECON	PW	I	D			03/1980-03/1980			T1080
USGS	10344993	RECON	PW	I	D			03/1980-03/1980			T1090
UDRR	65	RESEAR	SW	M	D	BJC7802		08/1970-04/1971	08/1971-06/1975		T1100
			NW	M	D			08/1970-06/1975			T1100
			TW	M	D			08/1970-05/1973			T1100
			SW	W	D			04/1971-08/1971			T1100
NDEP	N310053										T1100

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
243	Bronco Creek above mouth, at Hirschdale Road	CA 057	NENW31 18N18E	392302/1200111	2	.00	5360.00	.00
251	Truckee River at Floriston	CA 057	NWSW30 18N18E	392340/1200125	1	84.3A	5300.00	.00
255	Truckee River at Floriston Dam	CA 057	SWNW30 18N18E	392348/1200124	1	.00	5300.00	.00
261	Truckee River at Farad	CA 057	SESE12 18N17E	392517/1200155	1	82.42	5150.00	.00
264	Truckee River at Farad	CA 057	SENE12 18N17E	392541/1200159	1	81.89	5149.00	932.56
264	Truckee River at Farad	CA 057	SENE12 18N17E	392541/1200159	1	81.89	5149.00	932.56
277	Steamboat Dam diversion (right bank)	NV 031	NESE31 19N18E	392759/1200005	1	78.00	5040.00	.00
287	Coldron Ditch diversion (left bank) Verdi power diversion (right bank)	NV 031	SESE19 19N18E	392934/1195929	1	75.88	5120.00	.00
288	Truckee River near Essex	NV 031	SENE19 19N18E	393000/1195936	1	75.31	4780.00	.00
294	Truckee River at Crystal Peak Park, at Verdi	NV 031	SENE18 19N18E	393050/1195942	1	74.30	4820.00	.00
297	Dog Creek near Verdi, NV	CA 091	SWSW30 20N18E	393351/1200128	2	.00	5720.00	16.20
300	Truckee River at Bridge Street bridge, at Verdi	NV 031	NESE07 19N18E	393127/1195932	1	73.50	4840.00	.00
306	Katz Ditch near Verdi	NV 031	SWSW08 19N18E	393113/1195916	3	.00	4900.00	.00
310	Viking Metals Storm Drain from ponds, Verdi	NV 031	SESE08 19N18E	393122/1195829	1	.00	4800.00	.00
311	Truckee River below Viking Plant	NV 031	SESE08 19N18E	393118/1195025	1	.00	4800.00	.00
312	Truckee River near Verdi	NV 031	NENE17 19N18E	393110/1195819	1	72.00	4830.00	.00

for the Truckee and Carson River basins--Continued

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Computer files	Operating History			Seq. No.
UDRR	66	RESEAR	SW	M	D	BJC7802		08/1970-04/1971	08/1971-05/1974		T1110
			NW	M	D			08/1970-05/1974			T1110
			TW	M	D			08/1970-05/1973			T1110
			SW	W	D			04/1971-07/1971			T1110
NDEP	310052										T1110
USGS	10345900										T1120
USGS	10345909	RECON	PW	I	D			03/1980-03/1980			T1130
DRI	T42	AMBMON	CW	M	A			01/1968			T1140
NDEP	310000										T1140
CDWR	G71195		DW	M				09/1961-10/1961			T1140
			DW	PR				04/1977-04/1978			T1140
			TW	I				09/1966-09/1966	05/1971-05/1971		T1140
			CW	I				09/1966-09/1966	05/1971-05/1971	04/1978-04/1978	T1140
			CW	PR				05/1952-09/1966	04/1977-07/1978	04/1973-09/1976	T1140
			TW	PR				05/1952-09/1966	04/1977-07/1978		T1140
			NW	M				03/1977-07/1978	03/1962-09/1967		T1140
			NE	SR				12/1967-06/1968			T1140
			CW	M				03/1977-12/1977			T1140
USGS	10346000		GF	CM	A		W	00/1890-00/1890	00/1890		T1150
MCEE	R-7	INTENS	CW	W	D	MEE7701		07/1976-11/1976	09/1977-10/1977		T1160
			NW	W	D	MEE7801		07/1976-11/1976	09/1977-10/1977		T1160
			TW	W	D			07/1976-11/1976	09/1977-10/1977		T1160
			NW	W	D			07/1976-11/1976	09/1977-10/1977		T1160
			DW	W	D			07/1976-11/1976			T1160
			SW	W	D			07/1976-11/1976	09/1977-10/1977		T1160
			BW	BW	D			07/1976-11/1976			T1160
			AG	M	D			09/1976-11/1976			T1160
KE	S-6	INTENS	CW	BW	D	KEN7302		08/1972-10/1972			T1160
			NW	BW	D			08/1972-10/1972			T1160
			NW	BW	D			08/1972-10/1972			T1160
			DW	BW	D			08/1972-10/1972			T1160
			IB	M	D			07/1972-10/1972			T1160
			PE	M	D			07/1972-10/1972			T1160
			PW	M	D			08/1972-10/1972			T1160
USGS	10346556	RECON	PW	I	D			03/1980-03/1980			T1170
FWM	11										T1180
USGS	10347000		GF	CM	D		W	00/1889-00/1889			T1190
CDWR	G71150										T1190
USGS	10347050	INTENS									T1200
PEL	TU01	INTENS	CW	BM	D	PEL7902		10/1977-08/1978			T1200
			PW	Q	D			10/1977-08/1978			T1200
			DW	BM	D			10/1977-08/1978			T1200
			TW	BM	D			10/1977-08/1978			T1200
			NW	BM	D			10/1977-08/1978			T1200
			SB	BM	D			11/1977-08/1978			T1200
			PB	Q	D			11/1977-08/1978			T1200
			TB	BM	D			11/1977-08/1978			T1200
			DB	BM	D			11/1977-08/1978			T1200
			AF	I	D			10/1977-10/1977			T1200
			PE	I	D			10/1977-02/1978			T1200
			IB	BM	D			11/1977-08/1978			T1200
USGS	10347300		GF	CM	D		W	00/1956-00/1961			T1210
CDWR	G71145										T1210
USGS	10347320	RECON	PW	I	D			03/1980-03/1980			T1220
USGS	10347331										T1230
FWM	13	WATMAN	GF	W	A						T1230
USGS	10347333										T1240
USGS	10347335										T1250
USGS	10347336										T1260
USGS	10347337										T1260

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
313	Truckee River at Glen Meadows Trailer Perk, near Verdi	NV 031	NWNW16 19N18E	393109/1195810	1	41.58	4830.00	.00
317	Coldron Ditch et Verdi	NV 031	SWSE07 19N18E	393112/1195951	2	.00	4960.00	.00
321	Truckee River near U.S. 40, below Verdi	NV 031	SWSE09 19N18E	393114/1195732	1	71.09	4740.00	.00
324	Highland Ditch at Reno	NV 031	NWNE16 19N18E	393106/1195728	2	.00	4740.00	.00
341	Truckee River at Laughtons	NV 031	SWSE13 19N18E	393026/1195409	1	66.75	4640.00	.00
341	Truckee River at Circle D Ranch Bridge	NV 031	SESE13 19N18E	393025/1195407	1	.00	4640.00	.00
344	Hunter Creek near Reno	NV 031	SWSW19 19N19E	392928/1195355	2	.00	5040.00	11.5P
347	Hunter Creek into Sierra Pecific Power Company diversion, near Reno	NV 031	SESW19 19N19E	392936/1195334	2	.00	5000.00	.00
348	Hunter Creek below Sierre Pacific Power Company diversion, near Reno	NV 031	NWNE19 19N19E	393013/1195322	2	.00	4680.00	.00
350	Hunter Creek at mouth, near Reno	NV 031	NENW19 19N19E	393016/1195326	2	.00	4660.00	.00
352	Truckee River at Old Mayberry Bridge	NV 031	NENW19 19N19E	393017/1195327	1	65.88	4622.00	.00
353	Truckee River at Mayberry Drive, below Lawton	NV 031	SWSE18 19N19E	393024/1195317	1	65.70	4610.00	.00
363	South Side Ditch near Reno	NV 031	NESW17 19N19E	393033/1195232	2	.00	4600.00	.00
373	Truckee River at Idlewild Park	NV 031	SESE10 19N19E	393116/1194942	1	.00	4510.00	.00
374	Truckee River above Sierra Pacific Power Co. Idlewild Intake, at Reno	NV 031	SESE10 19N19E	393113/1194937	1	61.71	4510.00	.00
380	Peavine Creek near Reno	NV 031	SENE05 19N19E	393233/1195153	2	.00	4940.00	2.34P
382	Truckee River in Wingfield Park, at Reno	NV 031	NWSE11 19N19E	393127/1194858	1	.00	4490.00	.00
400	Truckee River at Reno	NV 031	NWNW07 19N20E	393152/1194708	1	59.07	4440.00	67.00
404	Sierra Pacific Power Company Glendale diversion near Sparks	NV 031	NWSE07 19N20E	393135/1194630	1	.00	4430.00	.00
407	Truckee River at Glendale Avenue, near Sparks	NV 031	NWSE07 19N20E	393133/1194631	1	58.55	4430.00	.00
413	Sessions Ditch near Reno	NV 031	NWSE07 19N20E	393137/1194632	2	.00	4430.00	.00
418	Truckee River near Sparks	NV 031	NWNE16 19N20E	393103/1194427	1	56.16	4390.00	.00

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Data availability Computer files	Operating History			Seq. No.
USGS	10347339										T1270
USGS	10347390										T1280
FWM	12	WATMAN	GF	W	A			01/1927-12/1958	01/1960-12/1979		T1280
DRI	TS7	AMBMON	CW	M	D			08/1968-06/1979			T1290
USGS	10347420										T1300
FWM	14										T1300
USGS	10347500		GF	CM	D		W	00/1890-00/1890			T1310
CDWR	G71143										T1310
DRI	T181	AMBMON	CW	M	A			12/1975			T1320
NDEP	310092										T1320
USGS	10347600		GF	CM	A		W	00/1961			T1330
USGS	10347610	FWM 55									T1340
FWM	55	WATMAN	GF	W	A						T1340
USGS	10347620	FWM 56									T1350
FWM	56	WATMAN	GF	W	A						T1350
USGS	10347650										T1360
KE	S7	INTENS	CW	BW	D	KEN7302		08/1972-10/1972			T1370
			MW	BW	D			08/1972-10/1972			T1370
			NW	BW	D			08/1972-10/1972			T1370
			DW	BW	D			08/1972-10/1972			T1370
NCEE	R-8	INTENS	CW	W	D	MEE7701		07/1976-11/1976	09/1977-10/1977		T1370
			MW	W	D	MEE7801		07/1976-11/1976	09/1977-10/1977		T1370
			TW	W	D			07/1976-11/1976	09/1977-10/1977		T1370
			DW	W	D			07/1976-11/1976			T1370
			SW	W	D			07/1976-11/1976	09/1977-10/1977		T1370
			BW	BW	D			07/1976-11/1976			T1370
			AG	M	D			09/1976-11/1976			T1370
			MW	W	D				09/1977-10/1977		T1370
USGS	10347690										T1380
USGS	10347695	FWM 17									T1390
FWM	17	WATMAN	GF	W	A						T1390
DRI	T44	AMBMON	CW	M	A			01/1968			T1400
NDEP	N310001										T1400
USGS	10347710										T1410
USGS	10347800		GF	CM	A		W	00/1963			T1420
USGS	10347861										T1430
USGS	10348000		GF	CM	A		W	00/1906-00/1921	00/1925-00/1926	00/1930-00/1935	T1440
								00/1943-00/1943	00/1946		T1440
CDWR	G71142										T1440
DRI	T79										T1440
USGS	10348034										T1450
FWM	24										T1450
USGS	10348036	RECON	PW	I	D			03/1980-03/1980			T1460
USGS	10348150	FWM 23									T1470
FWM	23	WATMAN	GF	W	A						T1470
USGS	10348200										T1480

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
419	Truckee River at Boynton Lane bridge	NV 031	NWNE16 19N20E	393103/1194424	1	56.12	4390.00	.00
421	Truckee River Intragravel neer Sparks	NV 031	SWNW15 19N20E	393048/1194356	1	55.58	4390.00	.00
429	Orr Ditch near Reno	NV 031	NWSE16 19N19E	393043/1195111	2	.00	4560.00	.00
430	Orr Ditch above Spanish Springs Valley near Sparks	NV 031	SWSW27 20N20E	393358/1194348	2	.00	4480.00	.00
431	Orr Ditch to Spanish Springs Valley near Sparks	NV 031	SWSW27 20N20E	393358/1194351	2	.00	4500.00	.00
433	North Truckee Drain at Spanish Springs Valley Road	NV 031	SESW27 20N20E	393358/1194331	2	.00	4420.00	.00
434	North Truckee Drain below Spanish Springs Valley, near Sparks	NV 031	SESW27 20N20E	393358/1194328	2	.00	4420.00	.00
438	North Truckee Ditch at Sparks	NV 031	NWNW34 20N20E	393348/1194347	2	.00	4500.00	.00
441	Sullivan and Kelly Ditch at Sparks	NV 031	SENW07 19N20E	393149/1194647	3	.00	4440.00	.00
446	Orr Ditch Siphon near Sparks	NV 031	SWSW27 20N20E	393355/1194346	3	.00	4470.00	.00
447	North Truckee Drain at Kleppe Lane, near Sparks	NV 031	NESW11 19N20E	393130/1194218	2	.00	4383.00	7.95
450	Glendale Ditch at Sparks	NV 031	NENW17 19N20E	393111/1194544	2	.00	4410.00	.00
455	Truckee River above Steamboat Creek	NV 031	SWSE11 19N20E	393115/1194210	1	53.53	4380.00	.00
458	Franktown Creek near Carson City	NV 031	SWSE32 16N19E	391212/1195217	3	.00	7360.00	3.24P
459	Franktown Creek at Franktown	NV 031	NWNE09 16N19E	391623/1195102	3	.00	5190.00	14.P
460	Franktown Creek at Old Highway 395	NV 031	SWSW03 16N19E	391626/1195026	3	.00	5060.00	.00
462	Washoe Lake near Carson City	NV 031	SWSE01 16N19E	391630/1194735	2	.00	5030.00	83.96
463	Little Washoe Lake near Steamboat	NV 031	NENW24 17N19E	391945/1194800	2	.00	5030.00	83.9P

for the Truckee and Carson River basins--Continued

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Computer files	Operating History		Seq. No.
KE	S8	INTENS	CW	BW	D	KEN7302		08/1972-10/1972		T1490
			MW	BW	D			08/1972-10/1972		T1490
			NW	BW	D			08/1972-10/1972		T1490
			DW	BW	D			08/1972-10/1972		T1490
			IB	M	D			07/1972-10/1972		T1490
			PE	M	D			07/1972-10/1972		T1490
			PH	M	D			08/1972-10/1972		T1490
MCEE	R-9A	INTENS	CW	W	D	MEE7701		07/1976-11/1976	09/1977-10/1977	T1490
			NW	W	D	MEE7801		07/1976-11/1976	09/1977-10/1977	T1490
			TW	W	D			07/1976-11/1976	09/1977-10/1977	T1490
			MW	W	D			07/1976-11/1976	09/1977-10/1977	T1490
			DW	W	D			07/1976-11/1976		T1490
			SW	W	D			07/1976-11/1976	09/1977-10/1977	T1490
			AG	M	D			09/1976		T1490
DRI	T46	AMBMON	CW	M	A			01/1968		T1490
NDEP	N310002									T1490
USGS	10348201									T1500
USGS	10348210	FWM 18								T1510
FWM	18	WATMAN	GF	W	A			01/1972-12/1979		T1510
USGS	10348215									T1520
USGS	10348220	FWM 27								T1530
FWM	27	WATMAN	GF	W	A			01/1927-12/1958	01/1960-12/1979	T1530
USGS	10348245									T1540
USGS	10348250	FWM 28								T1550
FWM	28	WATMAN	GF	M	A					T1550
USGS	10348270	FWM 21								T1560
FWM	21									T1560
USGS	10348275	FWM 20								T1570
FWM	20									T1570
USGS	10348290	FWM 74								T1580
FWM	74	WATMAN	GF	W	A					T1580
USGS	10348300									T1590
DRI	T64	AMBMON	CW	M	A			08/1968		T1590
FWM	29	WATMAN	GF	W	A					T1590
USGS	10348310	FWM 26								T1600
FWM	26									T1600
PEL	TU02	INTENS	CW	BM	D	PEL7902		10/1977-08/1978		T1610
			PW	Q	D			10/1977-08/1978		T1610
			DW	BM	D			10/1977-08/1978		T1610
			NW	BM	D			10/1977-08/1978		T1610
			TW	BM	D			10/1977-08/1978		T1610
			SB	BM	D			11/1977-08/1978		T1610
			PB	Q	D			11/1977-08/1978		T1610
			TB	BM	D			11/1977-08/1978		T1610
			DB	BM	D			11/1977-08/1978		T1610
			AF	BM	D			10/1977-08/1978		T1610
			PE	BM	D			10/1977-08/1978		T1610
			IB	BM	D			10/1977-08/1978		T1610
USGS	10348460									T1620
USGS	10348500		GF	CM	D		W	00/1948-00/1955		T1630
CDWR	G71141									T1630
UDRR	70	RESEAR	SW	W	D	BJC7802		11/1970-06/1971		T1640
			NW	M	D			11/1970-06/1971		T1640
			TW	M	D			11/1970-06/1971		T1640
USGS	10348700		GF	M	A		W	00/1963		T1650
USGS	10348800		GF	M	A		W	00/1963		T1660

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
465	Steamboet Creek at Washoe City	NV 031	NENW24 17N19E	391949/1194809	2	.00	5030.00	.00
471	Smith Ditch near Steamboat	NV 031	SWSW07 17N20E	392057/1194714	4	.00	4900.00	.00
476	Lower Sauer Ditch near Steamboat	NV 031	NWSW07 17N20E	392100/1194710	4	.00	4880.00	.00
480	Galena Creek at Highway 27, near Washoe City	NV 031	SENW09 17N19E	392118/1195119	3	.00	6240.00	.00
482	Galena Creek near Steamboat	NV 031	SWSW02 17N19E	392143/1194937	3	.00	5600.00	8.5P
489	Crutchfield Ditch near Steamboat	NV 031	SESW03 17N19E	392143/1195024	4	.00	5960.00	.00
494	North Callahan Ditch near Steamboat	NV 031	SWSW02 17N19E	392143/1194920	4	.00	5520.00	.00
501	South Callahan Ditch near Steamboat	NV 031	SWSW02 17N19E	392143/1194920	4	.00	5520.00	.00
504	Galena Creek near Washoe City	NV 031	SESE12 17N19E	392058/1194722	3	.00	4920.00	.00
508	Galena Creek near Washoe	NV 031	NESW07 17N20E	392107/1194702	3	.00	4840.00	18.P
514	Upper Sauer Ditch near Steamboat	NV 031	NWSW07 17N20E	392107/1194710	3	.00	4870.00	.00
517	Steamboat Creek near Steamboat	NV 031	SWSE05 17N20E	392143/1194527	2	.00	4680.00	.00
524	Hansen Ditch near Steamboat	NV 031	SESE05 17N20E	392149/1194513	3	.00	4650.00	.00
529	Big Ditch near Staamboat	NV 031	SESE05 17N20E	392144/1194521	3	.00	4680.00	.00
534	Hughes and Cameron Ditch near Steamboat	NV 031	SESE05 17N20E	392151/1194511	3	.00	4640.00	.00
537	Steamboat Creek at Steamboat	NV 031	SESW33 18N20E	392238/1194434	2	.00	4600.00	122.74
542	Steamboat Ditch near Floriston	NV 031	NWNW29 19N18E	392921/1195916	3	.00	5000.00	.00
552	Steamboat Ditch near Steamboat	NV 031	NWSE29 18N20E	392342/1194535	3	.00	4740.00	.00
556	Steamboat Creek below Steamboat Ditch, at Steamboat	NV 031	SWSE33 18N20E	392242/1194431	2	.00	4600.00	.00
557	Steamboat Creek at Steamboat Springs	NV 031	NWSE33 18N20E	392245/1194421	2	.00	4600.00	123.P
562	Steamboat Creek at Highway 17, near Steamboat	NV 031	NENW28 18N20E	392410/1194434	2	.00	4500.00	.00
565	Brown Ditch near Steamboat	NV 031	NESE13 17N19E	392019/1194731	2	.00	4960.00	.00
571	Crane-Clow Ditch near Steamboat	NV 031	SWSE28 18N20E	392329/1194416	3	.00	4570.00	.00

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Computer files	Operating History		Seq. No.
USGS	10348805	FWM 32								T1670
FWM	32	WATMAN	GF	M	A			06/1979-07/1979		T1670
USGS	10348825	FWM 37								T1680
FWM	37									T1680
USGS	10348828	FWM 40								T1690
FWM	40									T1690
UDRR	69	RESEAR	SW	M	D	BJC7802		08/1970-04/1971	06/1971-05/1974	T1700
			NW	M	D			08/1970-05/1974		T1700
			TW	M	D			08/1970-05/1973		T1700
USGS	10348900		GF	CM	A		W	00/1961		T1710
FWM	34	WATMAN	GF	M	A			10/1961		T1710
USGS	10348930	FWM 33								T1720
FWM	33									T1720
USGS	10348950	FWM 35								T1730
FWM	35									T1730
USGS	10348970	FWM 36								T1740
FWM	36									T1740
USGS	10348990	FWM 38								T1750
FWM	38	WATMAN	GF	M	A					T1750
USGS	10349000		GF	M	D		W	00/1913-00/1914		T1760
CDWR	G71140									T1760
USGS	10349010									T1770
FWM	39									T1770
USGS	10349100	FWM 41								T1780
FWM	41	WATMAN	GF	M	A					T1780
USGS	10349150	FWM 44								T1790
FWM	44									T1790
USGS	10349210	FWM 42								T1800
FWM	42	WATMAN	GF	M	A					T1800
USGS	10349290	FWM 43								T1810
FWM	43	WATMAN	GF	M	A					T1810
USGS	10349300		GF	M	A		W	00/1961		T1820
CDWR	G71138									T1820
USGS	10349350	FWM 10								T1830
FWM	10	WATMAN	GF	M	A			01/1927-12/1958	01/1960-12/1979	T1830
USGS	10349380	FWM 47								T1840
FWM	47	WATMAN	GF	M	A					T1840
USGS	10349490									T1850
USGS	10349500		GF	M	D		W	00/1900-00/1901		T1860
PEL	SU01	INTENS	CW	M		PEL7902		10/1977-08/1978		T1870
			PW	Q				10/1977-08/1978		T1870
			NW	M				10/1977-08/1978		T1870
			TW	M				10/1977-08/1978		T1870
			DW	M				10/1977-08/1978		T1870
			SB	M				12/1977-08/1978		T1870
			PB	I				12/1977-08/1978		T1870
			TB	M				12/1977-08/1978		T1870
			DB	M				12/1977-08/1978		T1870
			AF	I				10/1977-10/1977		T1870
			PE	P				10/1977-08/1978		T1870
			IB	M				12/1977-08/1978		T1870
USGS	10349580	FWM 50								T1880
FWM	50	WATMAN	GF	M	A					T1880
USGS	10349650	FWM 45								T1890
FWM	45	WATMAN	GF	M	A					T1890

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
574	Whites Creek near Steamboat	NV 031	SENW34 18N19E	392304/1195021	3	.00	5990.00	8.02P
575	Whites Creek above Thomas Creek road	NV 031	SENW34 18N19E	392305/1195014	3	.00	5960.00	8.01P
576	Whites Creek main channel near Steamboat	NV 031	SWSW25 18N19E	392329/1194813	3	.00	5360.00	.00
585	Howerds Ditch near Steamboat	NV 031	SENW30 18N20E	392352/1194658	3	.00	5010.00	.00
589	Last Chance Ditch at Hunters Creek, near Reno	NV 031	NWNE19 19N19E	393014/1195322	3	.00	4660.00	.00
592	Evens Creek above agricultural diversion, near Reno	NV 031	SWNE04 18N19E	392725/1195056	4	.00	5290.00	.00
599	Howards Ditch above Highway 395, near Reno	NV 031	NWSE17 18N20E	392523/1194531	3	.00	4530.00	.00
605	Chandler Ditch at Highway 17, near Steamboat	NV 031	SENE28 18N20E	392354/1194406	3	.00	4580.00	.00
611	Lake Ditch at Mayberry Drive, near Reno	NV 031	SESE16 19N19E	393020/1195052	2	.00	4600.00	.00
615	Thomas Creek above Thomas Creek road, near Washoe City	NV 031	SWSW27 18N19E	392330/1195024	3	.00	6000.00	7.32P
616	Thomas Creek above Steamboat Ditch, near Reno	NV 031	NESE13 18N19E	392529/1194736	3	.00	4790.00	.00
623	Steamboat Creek at Bellevista Ranch, near Sparks	NV 031	SWNW34 19N20E	392822/1194355	2	.00	4830.00	.00
628	Boynton Slough above Boynton Lane, near Reno	NV 031	NESE20 19N20E	392942/1194515	3	.00	4390.00	.00
633	Dry Creek at Huffaker Lane near Reno	NV 031	NENW06 18N20E	392731/1194656	4	.00	4470.00	.00
637	Cochran Ditch at Reno	NV 031	NWSE11 19N19E	393128/1194847	3	.00	4470.00	.00
639	Cochran Ditch (Virginia lake outlet) at Reno	NV 031	SWNW24 19N19E	393003/1194815	3	.00	4455.00	.00
644	Dry Creek at Boynton Slough, near Reno	NV 031	SESE20 19N20E	392939/1194513	4	.00	4390.00	.00
651	Yori Drain above Steamboat Creek, near Sparks	NV 031	NWNE22 19N20E	393014/1194314	3	.00	4380.00	.00
656	Pioneer Ditch at Reno	NV 031	NWNW17 19N20E	393112/1194600	2	.00	4410.00	.00
659	Eastman Ditch at Reno	NV 031	NWSE07 19N20E	393135/1194631	3	.00	4430.00	.00
663	Pioneer Ditch at University Farms, near Reno	NV 031	NWSW15 19N20E	393044/1194344	3	.00	4380.00	.00
665	Pioneer Ditch at Jones Ranch, near Sparks	NV 031	NWSW14 19N20E	393043/1194246	3	.00	4380.00	.00

for the Truckee and Carson River basins--Continued

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Data availability Computer files	Operating History		Seq. No.
USGS	10349700		GF	M	D		M	00/1961-00/1966		T1900
UDRR	68	RESEAR	SW	M	D	BJC7802		08/1970-04/1971	06/1971-05/1974	T1910
			SW	M	D			04/1971-06/1971		T1910
			NW	M	D			08/1970-05/1974		T1910
			TW	M	D			08/1970-05/1973		T1910
USGS	10349720	FWM 49								T1920
FWM	49	WATMAN	GF	M	A					T1920
USGS	10349730	FWM 51								T1930
FWM	51	WATMAN	GF	M	A					T1930
USGS	10349740	FWM 15								T1940
FWM	15	WATMAN	GF	M	A			01/1927-12/1958	01/1960-12/1979	T1940
USGS	10349755	FWM 54								T1950
FWM	54									T1950
USGS	10349765	FWM 52								T1960
FWM	52	WATMAN	GF	M	A					T1960
USGS	10349780	FWM 46								T1970
FWM	46									T1970
USGS	10349810	FWM 16								T1980
FWM	16									T1980
UDRR	67		SW	M	D	BJC7802		08/1970-04/1971	06/1971-05/1974	T1990
			NW	M	D			08/1970-05/1974		T1990
			TW	M	D			08/1970-05/1973		T1990
USGS	10349830	FWM 53								T2000
FWM	53	WATMAN	GF	M	A					T2000
USGS	10349850	FWM 48								T2010
FWM	48									T2010
USGS	103498B0									T2020
USGS	10349920									T2030
USGS	10349938	FWM 19								T2040
FWM	19									T2040
USGS	10349940	FWM 72								T2050
FWM	72									T2050
USGS	10349960									T2060
USGS	10349970	FWM 73								T2070
FWM	73	WATMAN	GF	M	A					T2070
USGS	10349971	FWM 25								T2080
FWM	25									T2080
USGS	10349974	FWM 22								T2090
FWM	22	WATMAN	GF	M	A					T2090
USGS	10349975									T2100
USGS	10349979	FWM 31								T2110
FWM	31									T2110

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
668	Steamboat Creek at Kimlick Lane, near Reno	NV 031	SWNW14 19N20E	393047/1194241	2	.00	4380.00	.00
671	Pioneer Ditch Return #2 below Kimlick Lane, near Reno	NV 031	SWNW14 19N20E	393050/1194242	3	.00	4380.00	.00
673	Steamboat Creek above Reno-Sparks Sewage-Treatment Plant Outfall	NV 031	NENW14 19N20E	393101/1194220	2	.00	4380.00	.00
674	Reno-Sparks Sewage-Treatment Plant Outfall near Reno	NV 031	NWNE14 19N20E	393107/1194213	2	.00	4380.00	.00
676	Steamboat Creek at Footbridge	NV 031	NWNE14 19N20E	393109/1194212	2	.00	4380.00	.00
677	Steamboat Creek above mouth	NV 031	SWSE11 19N20E	393114/1194210	2	.00	4380.00	.00
680	Truckee River below Steamboat Creek	NV 031	SWSE11 19N20E	393115/1194206	1	53.51	4380.00	.00
681	Truckee River below Steamboat Creek (1st riffle)	NV 031	NENE14 19N20E	393109/1194152	1	53.28	4380.00	.00

for the Truckee and Carson River basins--Continued

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Computer files	Operating History		Seq. No.
USGS	10349980									T2120
DRI	T47	AMBMON	CW	M	A			01/1968		T2120
PEL	SU02	INTENS	CW	M	D	PEL7902		10/1977-08/1978		T2120
			NW	M	D			10/1977-08/1978		T2120
			TW	M	D			10/1977-08/1978		T2120
			DW	M	D			10/1977-08/1978		T2120
			PE	M	D			10/1977-08/1978		T2120
			AF	M	D			10/1977-08/1978		T2120
			PW	Q	D			10/1977-08/1978		T2120
			IB	M	D			11/1977-08/1978		T2120
			SB	M	D			11/1977-08/1978		T2120
			TB	M	D			11/1977-08/1978		T2120
			PB	Q	D			11/1977-08/1978		T2120
			DB		D			11/1977-08/1978		T2120
FWH	30	WATMAN	GF	W	A			11/1977-08/1978		T2120
USGS	10349986									T2130
MCEE	S-5	INTENS	CW	W	D	MEE7701		07/1976-11/1976	09/1977-10/1977	T2140
			NW	W	D	MEE7801		07/1976-11/1976	09/1977-10/1977	T2140
			TW	W	D			07/1976-11/1976	09/1977-10/1977	T2140
			MW	W	D			07/1976-11/1976	09/1977-10/1977	T2140
			SW	W	D			07/1976-11/1976	09/1977-10/1977	T2140
USGS	10349989									T2150
PEL	E001	INTENS	GW	M	D	PEL7902		10/1977-08/1978		T2150
			PW	Q	D			10/1977-08/1978		T2150
			NW	M	D			10/1977-08/1978		T2150
			TW	M	D			10/1977-08/1978		T2150
			DW	M	D			10/1977-08/1978		T2150
DRI	T95	AMBMON	CW	M	A			09/1968		T2150
PEL	SD01	INTENS	CW	M	D	PEL7902		10/1977-08/1978		T2160
			NW	M	D			10/1977-08/1978		T2160
			PW	M	D			10/1977-12/1977		T2160
			TW	M	D			10/1977-08/1978		T2160
			DW	M	D			10/1977-08/1978		T2160
			SB	M	D			11/1977-08/1978		T2160
			PB	M	D			11/1977-12/1977		T2160
			TB	M	D			11/1977-08/1978		T2160
			DB	M	D			11/1977-08/1978		T2160
			AF	M	D			10/1977-08/1978		T2160
			PE	M	D			10/1977-08/1978		T2160
			IB	M	D			10/1977-08/1978		T2160
CEE	I-8	INTENS	CW	W	D	MEE7701		07/1976-11/1976	09/1977-10/1977	T2170
			NW	W	D	MEE7801		07/1976-11/1976	09/1977-10/1977	T2170
			TW	W	D			07/1976-11/1976	09/1977-10/1977	T2170
			MW	W	D			07/1976-11/1976	09/1977-10/1977	T2170
			DW	W	D			07/1976-11/1976		T2170
			SW	W	D			07/1976-11/1976	09/1977-10/1977	T2170
			AG	W	D			08/1976-11/1976		T2170
DRI	T183									T2170
PEL	TD01	INTENS	CW	M	D	PEL7902		10/1977-08/1978		T2180
			PW	I	D			08/1978-08/1978		T2180
			DW	M	D			10/1977-08/1978		T2180
			NW	M	D			10/1977-08/1978		T2180
			TW	M	D			10/1977-08/1978		T2180
			SB	M	D			11/1977-08/1978		T2180
			PB	Q	D			11/1977-08/1978		T2180
			TB	M	D			11/1977-08/1978		T2180
			DB	M	D			11/1977-08/1978		T2180
			AF	M	D			10/1977-08/1978		T2180
			PE	M	D			10/1977-08/1978		T2180
			IB	M	D			10/1977-08/1978		T2180
PEL	TD02	INTENS	CW	M	D	PEL7902		10/1977-08/1978		T2190
			PW	Q	D			10/1977-08/1978		T2190
			NW	M	D			10/1977-08/1978		T2190
			TW	M	D			10/1977-08/1978		T2190
			DM	M	D			10/1977-08/1978		T2190
			SB	M	D			11/1977-08/1978		T2190
			DB	M	D			11/1977-08/1978		T2190
			TB	M	D			11/1977-08/1978		T2190
			AF	M	D			10/1977-08/1978		T2190
			PE	M	D			10/1977-08/1978		T2190
			IB	M	D			10/1977-08/1978		T2190

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
685	Truckee River at Southern Pacific rail road bridge, below Steamboat Creek	NV 031	NWNE13 19N20E	393109/1194107	1	52.36	4380.00	.00
686	Truckee River at Vista	NV 031	NWNE13 19N20E	393104/1194059	1	52.23	4368.59	431.35
687	Truckee River at Vista rest stop	NV 031	NWSW18 19N21E	393045/1194033	1	51.67	4380.00	.00
693	Largomarsino Noce Ditch near Vista	NV 031	SWSW17 19N21E	393035/1193943	1	.00	4390.00	.00
698	Truckee River at Lockwood	NV 031	SESE17 19N21E	393036/1193852	1	50.05	4340.00	.00
699	Groton diversion to south side wingfell with gate	NV 031	NWSW16 19N21E	393043/1193838	1	49.90	4340.00	.00
702	Long Valley Creek near Happy Valley	NV 029	NESW27 19N21E	392855/1193710	2	.00	4540.00	82.6P
708	Groton Ditch at Lockwood	NV 029	NWSW16 19N21E	393044/1193836	2	.00	4340.00	.00
712	Truckee River at upper bridge, near Mustang	NV 031	NESW15 19N21E	393048/1193708	1	48.25	4360.00	.00
718	Sheep Ranch Ditch near Lockwood	NV 029	NWSE16 19N21E	393046/1193755	2	.00	4330.00	.00
726	Diversion to grass field at Lockwood	NV 031	SESE17 19N21E	393029/1193855	3	.00	4380.00	.00
727	Return from grass field at Lockwood	NV 029	SESE17 19N21E	393033/1193850	3	.00	4350.00	.00
729	Largomarsino-Murphy Ditch near Vista	NV 029	SWSW16 19N21E	393029/1193839	2	.00	4360.00	.00
734	Truckee River at McCarran Diversion Dam, near Patrick	NV 031	NENW11 19N21E	393158/1193553	1	46.40	4320.00	.00
735	Truckee River below McCarran diversion near Patrick	NV 031	NWNE11 19N21E	393200/1193550	1	46.35	4320.00	.00

for the Truckee and Carson River basins--Continued

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Data availability Computer files	Operating History			Seq. No.
PEL	TD03	INTENS	CW	M	D	PEL7902		10/1977-08/1978			T2200
			NW	M	D			10/1977-08/1978			T2200
			TW	M	D			10/1977-08/1978			T2200
			DW	M	D			10/1977-08/1978			T2200
			PW	I	D			08/1978-08/1978			T2200
			SB	M	D			11/1977-08/1978			T2200
			PB	Q	D			11/1977-08/1978			T2200
			TB	M	D			11/1977-08/1978			T2200
			DB	M	D			11/1977-08/1978			T2200
			AF	M	D			10/1977-08/1978			T2200
			PE	M	D			10/1977-08/1978			T2200
			IB	M	D			11/1977-08/1978			T2200
USGS	10350000		GF	M	A		W	00/1899-00/1907	00/1932-00/1954	00/1958	T2210
CDWR	G71135										T2210
DRI	T59	AMBMON	CW	M	A			08/1968			T2220
NDEP	L310006										T2220
USGS	10350048	FWM 57									T2230
FWM	57	WATMAN	GF	W	A			01/1927-12/1958	01/1960-12/1979		T2230
USGS	10350050										T2240
NDEP	N310003										T2240
PEL	TD04	INTENS	CW	M	D	PEL7902		10/1977-08/1978			T2240
			PW	Q	D			10/1977-08/1978			T2240
			NW	M	D			10/1977-08/1978			T2240
			TW	M	D			10/1977-08/1978			T2240
			DW	M	D			10/1977-08/1978			T2240
			SB	M	D			11/1977-08/1978			T2240
			PB	Q	D			11/1977-08/1978			T2240
			TB	M	D			11/1977-08/1978			T2240
			DB	M	D			10/1977-08/1978			T2240
			AF	M	D			10/1977-08/1978			T2240
			PE	M	D			10/1977-08/1978			T2240
			IB	M	D			10/1977-08/1978			T2240
MCEE	R-9	INTENS	CW	W	D	MEE7701		07/1976-11/1976	09/1977-10/1977		T2240
			NW	W	D	MEE7801		07/1976-11/1976	09/1977-10/1977		T2240
			TW	W	D			07/1976-11/1976	09/1977-10/1977		T2240
			MW	W	D			07/1976-11/1976	09/1977-10/1977		T2240
			DW	W	D			07/1976-11/1976			T2240
			SW	W	D			07/1976-11/1976	09/1977-10/1977		T2240
			BW	W	D			07/1976-11/1976	09/1977-10/1977		T2240
			AG	W	D			09/1976-11/1976			T2240
USGS	10350057										T2260
USGS	10350100		PF		A			00/1967			T2270
USGS	10350130	FWM 59									T2280
FWM	59	WATMAN	GF	W	A			01/1927-12/1958	01/1960-12/1962	01/1972-12/1979	T2280
USGS											T2290
USGS	10350140	FWM 60									T2300
FWM	60	WATMAN	GF	W	A			01/1927-12/1958	01/1960-12/1979		T2300
USGS	10350145										T2310
USGS	10350146										T2320
USGS	10350150	FWM 58									T2330
FWM	58	WATMAN	GF	W	A			01/1927-12/1979			T2330
USGS	10350157										T2340
USGS											T2350

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
741	Truckee River at Patrick	NV 031	SWNW01 19N21E	393249/1193459	1	44.92	4320.00	.00
758	McCarran Ditch near Patrick	NV 031	SWSE02 19N21E	393216/1193543	2	.00	4320.00	.00
761	Diversion to grass pasture below Patrick	NV 031	NENW01 19N21E	393252/1193444	3	.00	4300.00	.00
762	Return from grass pasture below Patrick	NV 031	NWNE01 19N21E	393249/1193441	3	.00	4280.00	.00
775	Truckee River at Hill Diversion Dam	NV 031	NENW32 20N22E	393346/1193226	1	42.02	4280.00	.00
776	Truckee River below Hill Diversion Dam at Tracy	NV 029	NENW32 20N22E	393344/1193225	1	42.00	4280.00	.00
782	Truckee River above Tracy	NV 029	SWSW28 20N22E	393358/1193146	1	41.17	4280.00	.00
787	Truckee River at Tracy Diversion Dam, at Tracy	NV 031	NENW33 20N22E	393353/1193120	1	40.76	4280.00	.00
788	Truckee River below Tracy Diversion Dam, at Tracy	NV 031	NENW33 20N22E	393353/1193115	1	40.70	4280.00	.00
789	Truckee River below Tracy	NV 031	NWNE33 20N22E	393352/1193112	1	40.62	4238.15	.00
791	Truckee River (right bank) below Tracy	NV 031	NWNE33 20N22E	393351/1193106	1	40.55	4280.00	.00
802	Hill Ditch at Headgate near Tracy	NV 031	NENW32 20N22E	393347/1193225	2	.00	4280.00	.00
803	Hill Ditch at Tracy	NV 031	SESW28 20N22E	393400/1193129	2	.00	4280.00	.00
806	Truckee River at Clark	NV 031	SESW26 20N22E	393354/1192909	1	38.60	4220.00	.00
826	Truckee River at Derby Dam	NV 029	NESW19 20N23E	393508/1192654	1	34.88	4220.00	.00
827	Truckee Canal at Derby Dam	NV 031	NESW19 20N23E	393510/1192653	1	31.50	4200.00	.00
829	Truckee Canal below Derby Dam, near Wadsworth	NV 029	NESW19 20N23E	393508/1192653	1	30.49	4220.00	.00
849	Truckee Canal near Wadsworth	NV 031	NWNE17 20N24E	393624/1191841	1	22.94	4240.00	.00
861	Truckee Canal at U.S. 95A near Fernley	NV 019	NENE23 20N24E	393528/1191457	1	18.31	4200.00	.00

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Data availability Computer files	Operating History	Seq. No.
USGS	10350200								T2360
PEL	TD05	INTENS	CW	M	D	PEL7902		10/1977-08/1978	T2360
			NW	M	D			10/1977-08/1978	T2360
			TW	M	D			10/1977-08/1978	T2360
			DW	M	D			10/1977-08/1978	T2360
			SB	M	D			11/1977-08/1978	T2360
			PB	Q	D			11/1977-08/1978	T2360
			TB	M	D			11/1977-08/1978	T2360
			DB	M	D			11/1977-08/1978	T2360
			AF	M	D			10/1977-08/1978	T2360
			PE	M	D			10/1977-08/1978	T2360
			IB	M	D			11/1977-08/1978	T2360
USGS	10350320	FWM 61							T2370
FWM	61	WATMAN	GF	M	A			01/1927-12/1948 01/1952-12/1958 01/1960-12/1979	T2370
USGS	10350325								T2380
USGS	10350326								T2390
USGS	10350345								T2400
USGS									T2410
USGS	10350390								T2420
USGS									T2430
USGS									T2440
USGS	10350400								T2450
USGS	10350405								T2460
USGS	10350475	FWM 62							T2470
FWM	62	WATMAN	GF	M	A				T2470
USGS	10350480	FWM 63							T2480
FWM	63	WATMAN	GF	M	A			01/1927-12/1958 01/1960-12/1979	T2480
USGS	10350500		GF	M	D		M	00/1907-00/1915	T2490
DRI	T180	AMBMOW	CW	M	A			10/1973	T2490
			NW	M	A			05/1978	T2490
PEL	TD06	INTENS	CW	M	D			10/1977-08/1978	T2490
			PW	I	D			08/1978-08/1978	T2490
			NW	M	D			10/1977-08/1978	T2490
			TW	M	D			10/1977-08/1978	T2490
			DW	M	D			10/1977-08/1978	T2490
			SB	M	D			11/1977-08/1978	T2490
			PB	Q	D			11/1977-08/1978	T2490
			TB	M	D			11/1977-08/1978	T2490
			DB	M	D			11/1977-08/1978	T2490
			AF	M	D			10/1977-08/1978	T2490
			PE	M	D			10/1977-08/1978	T2490
			IB	M	D			10/1977-08/1978	T2490
NDEP	N310004								T2490
USGS	10351000								T2500
USGS									T2510
USGS	10351010	FWM 65							T2520
FWM	65	WATMAN	GF	M	A				T2520
USGS	10351300		GF	M	A		M	00/1966	T2530
USGS	10351320								T2540
PEL	TC10	INTENS	CW	M	D	PEL7902		10/1977-08/1978	T2540
			NW	M	D			10/1977-08/1978	T2540
			TW	M	D			10/1977-08/1978	T2540
			DW	B	D			10/1977-08/1978	T2540

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
863	Fernley Check Dam near Fernley	NV 019	NWNW24 20N24E	393529/1191442	1	18.10	4200.00	.00
870	Fernley agricultural drain near Fernley	NV 019	SENW17 20N25E	393600/1191210	2	.00	4120.00	.00
875	Truckee Canal at Anderson Check Dam	NV 019	SWSE20 20N25E	393454/1191154	1	15.15	4180.00	.00
886	Truckee Canal at Allendale Check Dam	NV 019	SESW24 20N25E	393447/1190739	1	11.15	4180.00	.00
893	Truckee CA at Mason Check Dam, near Hazen	NV 019	NESW04 19N26E	393221/1190426	1	6.47	4180.00	.00
894	Truckee Canal near Hazen	NV 019	SWSE04 19N26E	393212/1190413	1	6.23	4180.00	.00
898	Truckee Canal at Bango Check Dam, at Bango	NV 019	NENE22 19N26E	393014/1190241	1	3.33	4180.00	.00
905	Truckee Canal at U.S. 50, above Lahontan Reservoir	NV 001	SENE33 18N26E	392809/1190400	1	.51	4170.00	.00
912	Truckee River below Derby Dam, near Wadsworth	NV 031	NWSE19 20N23E	393507/1192628	1	34.52	4200.00	676.17
944	Washburn Ditch at Orchard	NV 031	SWNE22 20N23E	393517/1192315	2	.00	4170.00	.00
948	Truckee River at Painted Rock Bridge	NV 031	NWNE23 20N23E	393528/1192159	1	29.97	4160.00	.00
985	Truckee River at I-80, above Wadsworth	NV 031	SWNW03 20N24E	393753/1191657	1	25.10	4080.00	.00
992	Pierson Ditch at Wadsworth	NV 031	NESE08 20N24E	393646/11921824	2	.00	4080.00	.00
1003	Herman Ditch near Wadsworth	NV 031	NWSE08 20N24E	393648/1191833	2	.00	4080.00	.00
1006	Gregory-Monte Ditch near Wadsworth	NV 031	NESE14 20N2?31	393550/1192131	2	.00	4120.00	.00
1010	Diversion to alfalfa field, at Wadsworth	NV 031	SENW04 20N24E	393746/1191745	3	.00	4100.00	.00
1011	Return from alfalfa field, at Wadsworth	NV 031	SENW04 20N24E	393747/1191736	3	.00	4100.00	.00
1013	Herman Ditch return at Wadsworth	NV 031	SWNW03 20N24E	393755/1191658	2	.00	4070.00	.00
1016	Truckee River at old U.S. 40 bridge, at Wadsworth	NV 031	SWNW03 20N24E	393755/1191654	1	23.69	4076.00	.00

Operating agency	Agency site No.	Operation type	Type of date	Coll. frequency	Current status	Data availability Pub. No.	Data availability Computer files	Operating History			Seq. No.
USGS	10351322										T2550
PEL	TC5										T2550
USGS	10351350		GF	M	A		M	00/1968			T2560
USGS											T2570
USGS	10351367										T2580
USGS											T2590
USGS	10351400		GF	M	A		M	00/1966			T2600
USGS											T2610
USGS	10351590										T2620
USGS	10351600		GF	M	A			00/1909-00/1910	00/1916-00/1916	00/1918	T2630
CDWR	G71095										T2630
DRI	T80	AMBMON	CW	M	A			09/1968			T2630
			NW	M	A			07/1978			T2630
KE	S9	INTENS	CW	M		KEN7302		08/1972-10/1972			T2630
			MW	M				08/1972-10/1972			T2630
			NW	M				08/1972-10/1972			T2630
			DW	M				08/1972-10/1972			T2630
			IB	M				07/1972-10/1972			T2630
			PE	M				07/1972-10/1972			T2630
			PH	M				08/1972-10/1972			T2630
USGS	10351615	FWM 64									T2640
FWM	64	WATMAN	GF	M	A			01/1927-12/1956	01/1972-12/1979		T2640
USGS	10351619										T2650
DRI	T184	AMBMON	T		A			08/1979			T2660
USGS	10351630	FWM 67									T2670
FWM	67	WATMAN	GF	M	A			01/1927-12/1958	01/1965-12/1979		T2670
USGS	10351635	FWM 66									T2680
FWM	66	WATMAN	GF	M	A			01/1927-12/1958	01/1960-12/1979		T2680
USGS	10351638	FWM 75									T2690
FWM	75										T2690
USGS	10351643										T2700
USGS	10351644										T2710
USGS	10351646										T2720
USGS	10351648										T2730
KE	S10	INTENS	CW	M	D	KEN7302		08/1972-10/1972			T2730
			MW	M	D			08/1972-10/1972			T2730
			NW	M	D			08/1972-10/1972			T2730
			DW	M	D			08/1972-10/1972			T2730
PEL	TD07	INTENS	CW	M		PEL7902		10/1977-08/1978			T2730
			PW	Q				10/1977-08/1978			T2730
			NW	M				10/1977-08/1978			T2730
			TW	M				10/1977-08/1978			T2730
			DW	M				10/1977-08/1978			T2730
			SB	M				11/1977-08/1978			T2730
			PB	Q				11/1977-08/1978			T2730
			TB	M				11/1977-08/1978			T2730
			DB	M				11/1977-08/1978			T2730
			AF	M				10/1977-08/1978			T2730
			PE	M				10/1977-08/1978			T2730
			IB	M				11/1977-08/1978			T2730

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
1017	Truckee River at railroad bridge, at Wadsworth	NV 031	SWNW03 20N24E	393757/1191653	1	23.65	4076.00	.00
1023	Truckee River at Wadsworth	NV 031	SWSW34 21N24E	393823/1191655	1	23.11	4040.00	728.37
1029	Truckee River at Fellnagle Diversion Dam	NV 031	SWNE33 21N24E	393838/1191727	1	22.55	4080.00	.00
1030	Truckee River below Fellnagle Diversion Dam	NV 031	NWSE33 21N24E	393837/1191725	1	22.53	4040.00	.00
1030	Truckee River below Wadsworth (Ceresola Ranch)	NV 031	NWSE33 21N24E	393837/1191725	1	.00	4040.00	.00
1050	Fellnagle Ditch near Wadsworth	NV 031	SWNE33 21N24E	393840/1191725	2	.00	4080.00	.00
1052	Truckee River at S-S Diversion Dam near Wadsworth	NV 031	SWSE22 21N24E	394010/1191623	1	19.95	4040.00	.00
1062	Proctor Ditch at Wadsworth	NV 031	NWNW03 20N24E	393802/1191651	2	.00	4060.00	.00
1066	Egg Site above S-S Ranch	NV 031	SWSE15 21N24E	394052/1191615	1	.00	4010.00	.00
1074	Truckee River at S-S Ranch, near Wadsworth	NV 031	SENE16 21N24E	394129/1191707	1	17.82	4000.00	.00
1078	S-S Ranch	NV 031	SENE16 21N24E	394125/1191705	1	17.45	4000.00	.00
1084	Gardella Ditch near Wadsworth	NV 031	NESW15 21N24E	394107/1191630	2	.00	4000.00	.00
1088	Egg Site below S-S Ranch	NV 031	SWSW09 21N24E	394146/1191759	1	16.75	4000.00	.00
1095	Truckee River 7.9 miles below Wadsworth	NV 031	NWNW05 21N24E	394325/1191915	1	15.82	3960.00	.00
1112	Truckee River at Dead Ox Wash, near Nixon	NV 031	NENE31 22N24E	394414/1191924	1	13.18	3960.00	.00
1112	Truckee River Intragravel at Dead Ox	NV 031	NENE31?22N24E	394414/1191924	1	13.18	3960.00	.00
1134	Truckee River near Nixon	NV 031	SWNW18 22N24E	394640/1192010	1	9.50	3960.00	827.34
1142	Truckee River at Numana Dam, near Nixon	NV 031	SWNE12 22N23E	394723/1192054	1	8.21	3940.00	.00
1180	Truckee River at Highway 447, at Nixon	NV 031	SESE26 23N23E	394945/1192136	1	3.22	3920.00	.00
1188	Indian Ditch near Nixon	NV 031	SWNE12 22N23E	394733/1192043	2	.00	3940.00	.00

for the Truckee and Carson River basins--Continued

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Data availability Computer files	Operating History			Seq. No.
USGS											T2740
USGS	10351650		GF	M	A		W	00/1965			T2750
CDWR	G71080										T2750
NDEP	N310097										T2750
USGS											T2760
USGS											T2770
DRI	TS4	AMBMON	CW	M	A			07/1968			T2780
			NW	M	A			02/1978			T2780
NDEP	N310005										T2780
USGS	10351660	FWM 69									T2790
FWM	69	WATMAN	GF	W	A			01/1927-12/1958	01/1960-12/1979		T2790
USGS											T2800
USGS	10351668	FWM 68									T2810
FWM	68	WATMAN	GF	W	A			01/1927-12/1958	01/1960-12/1967	01/1969-12/1970	T2810
								01/1927-12/1979			T2810
USGS											T2820
USGS											T2830
DRI	T185	AMBMON	CW	M	A			08/1979			T2840
KE	S11	INTENS	CW	W	D	KEN7302		08/1972-10/1972			T2840
			NW	W	D			08/1972-10/1972			T2840
			NW	W	D			08/1972-10/1972			T2840
			DW	W	D			08/1972-10/1972			T2840
			IB	M	D			07/1972-10/1972			T2840
			PE	M	D			07/1972-10/1972			T2840
			PH	M	D			08/1972-10/1972			T2840
USGS	10351682	FWM 70									T2850
FWM	70	WATMAN	GF	W	A			01/1927-12/1958	01/1960-12/1962	01/1975-12/1979	T2850
USGS											T2860
USGS											T2870
USGS	10351690										T2880
KE	S12	INTENS	CW	W	D	KEN7302		08/1972-10/1972			T2880
			NW	W	D			08/1972-10/1972			T2880
			NW	W	D			08/1972-10/1972			T2880
			DW	W	D			08/1972-10/1972			T2880
USGS	10351691										T2890
USGS	10351700		GF	M	A			00/1957	W	W	T2900
CDWR	G71060										T2900
USGS	10351725										T2910
USGS	10351750										T2920
DRI	T50	AMBMON	CW	M	A			01/1968			T2920
PEL	TD08	INTENS	CW	M	D	PEL7902		10/1977-08/1978			T2920
			NW	M	D			10/1977-08/1978			T2920
			TW	M	D			10/1977-08/1978			T2920
			DW	M	D			10/1977-08/1978			T2920
			SB	M	D			11/1977-08/1978			T2920
			PB	Q	D			11/1977-08/1978			T2920
			TB	M	D			11/1977-08/1978			T2920
			DB	M	D			11/1977-08/1978			T2920
			PE	M	D			10/1977-08/1978			T2920
			IB	M	D			11/1977-08/1978			T2920
USGS	10351755	FWM 71									T2930
FWM	71	WATMAN	GF	W	A			01/1927-12/1958	01/1960-12/1962	01/1964-12/1970	T2930
								01/1972-12/1979			T2930

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
1193	Truckee River at Marble Bluff Dam	NV 031	SESW15 23N23E	395120/1192332	1	.00	3854.50	937.43
1195	Truckee River Fishway at Marble Bluff Dam	NV 031	SWSW15 23N23E	395119/1192335	2	.00	3860.00	.00
1197	Truckee River below Marble Bluff Dam, near Nixon	NV 031	NWNW22 23N23E	395111/1192344	1	-.05	3860.00	.00
1198	Truckee River Delta at Pyramid Lake	NV 031	SWNW19 23N23E	395053/1192647	1	.00	3840.00	.00
1199	Truckee River Delta at Pyramid Lake	NV 031	NENW19 23N23E	395110/1192627	1	.00	3820.00	.00
1250	East Fork Carson River above Soda Springs Ranger Station	CA 003	SESW28 08N21E	383012/1194033	1	1.00	6810.00	29.34
1253	East Fork Carson River	CA 003	NWSE27 08N21E	383032/1193920	1	.00	6705.00	.00
1272	Silver King Creek	CA 003	NENW31 08N21E	383000/1193614	2	.00	7680.00	.00
1273	Silver King Creek near Coleville	CA 003	SWNE30 08N22E	383042/1193602	2	.00	7650.P	31.78
1281	East Fork Carson River at Silver King Valley, near Markleeville	CA 003	SWSE27 09N21E	383530/1193923	1	.00	7360.00	.00
1297	Wolf Creek near Markleeville	CA 003	SENE24 08N20E	383130/1194317	2	.00	7360.00	11.34
1299	Upper Wolf Creek	CA 003	NWSW05 08N21E	383359/1194159	2	.00	6640.00	.00
1300	Wolf Creek at Wolf Creek Meadows	CA 003	NWNE29 09N21E	383602/1194122	2	.00	6400.00	.00
1301	Lower Wolf Creek	CA 003	NWNE29 09N21E	383603/1194122	2	.00	6400.00	.00
1315	Silver Creek below Pennsylvenia Creek, near Markleeville	CA 003	SENE28 09N20E	383557/1194633	2	.00	6480.00	19.51
1318	West Fork West Creek	CA 003	NESE34 09N20E	383444/1194513	3	.00	8910.00	.00
1319	Middle Fork West Creek	CA 003	NWSE35 09N20E	383447/1194502	4	.00	8800.00	.00
1320	East Fork West Creek	CA 003	SENW35 09N20E	383458/1194454	4	.00	8580.00	.00
1321	West Creek below Sele	CA 003	SWSW26 09N20E	383528/1194510	3	.00	7820.00	.00
1322	West Creek at Highway 4	CA 003	NWSE22 09N20E	383633/1194532	3	.00	6600.00	.00
1324	Silver Creek near Markleeville	CA 003	SWSE14 09N20E	383712/1194430	2	.00	6160.00	27.30
1326	Upper East Creek	CA 003	NESW25 09N20E	383542/1194341	3	.00	8400.00	.00
1327	Middle East Creek	CA 003	SWSW24 09N20E	383619/1194404	3	.00	7600.00	.00
1328	East Creek at Highway 4	CA 003	SESE14 09N20E	383713/1194422	3	.00	6100.00	.00
1331	Silver Creek near mouth to East Fork Carson River	CA 003	NWNE13 09N20E	383743/1194322	2	.00	5920.00	.00

for the Truckee and Carson River basins--Continued

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Computer files	Operating History	Seq. No.
USGS	10351775								T2940
PEL	TD09	INTENS	CW	M	D	PEL7902		10/1977-08/1978	T2940
			NW	M	D			10/1977-08/1978	T2940
			TW	M	D			10/1977-08/1978	T2940
			DW	M	D			10/1977-08/1978	T2940
USGS	10351778								T2950
USGS	10351780								T2960
USGS	10351793								T2970
USGS	10302500		GF	M	D		M	00/1946-00/1951	C0010
CDWR	G83820		F						C0010
UDRR	94	RESEAR	SW	M	D	BJC7802		09/1973-06/1976	C0020
			NW	M	D			09/1973-06/1976	C0020
UDRR	95	RESEAR	SW	M	D	BJC7802		09/1973-06/1976	C0030
			NW	M	D			09/1973-06/1976	C0030
USGS	10303000		GF	M	D		M	00/1946-00/1951	C0040
CDWR	G83730								C0040
USGS	10303500		GF	M	D		M	00/1910-00/1912	C0050
CDWR	G83680								C0050
USGS	10304000		GF	M	D		M	00/1946-00/1951	C0060
CDWR	G83620								C0060
UDRR	93	RESEAR	SW	M	D	BJC7802		09/1973-06/1975	C0070
			NW	M	D			09/1973-10/1975	C0070
CDWR	G83614.1		TW	I				08/1956-08/1956	C0080
			CW	I				08/1956-08/1956	C0080
UDRR	92	RESEAR	SW	M	D	BJC7802		09/1973-06/1975	C0090
			NW	M	D			09/1973-10/1975	C0090
USGS	10304500		GF	M	D		M	00/1946-00/1967	C0100
CDWR	G83525		PF		A			00/1968	C0100
UDRR	84	RESEAR			D				C0110
UDRR	85	RESEAR	SW	M	D	BJC7802		08/1973	C0120
			NW	M	D			08/1973	C0120
UDRR	86	RESEAR	SW	M	D	BJC7802		08/1973-07/1975	C0130
			NW	M	D			08/1973-07/1975	C0130
UDRR	87	RESEAR	SW	M	D	BJC7802		08/1973-07/1975	C0140
			NW	M	D			08/1973-07/1975	C0140
UDRR	88	RESEAR	SW	M	D	BJC7802		08/1973-05/1976	C0150
			NW	M	D			08/1973-05/1976	C0150
USGS	10305000		GF	M	D		M	00/1910-00/1912	C0160
CDWR	G83480								C0160
UDRR	89	RESEAR	SW	M	D	BJC7802		08/1973-07/1975	C0170
			NW	M	D			08/1973-07/1975	C0170
UDRR	90	RESEAR	SW	I	D	BJC7802		08/1973-08/1973	C0180
			NW	I	D			08/1973-08/1973	C0180
UDRR	91	RESEAR	SW	M	D	BCJ7802		08/1973-04/1975	C0190
			SW	M	D			05/1975-05/1976	C0190
			NW	M	D			08/1973-05/1976	C0190
CDWR	G834979.75		TW	I				08/1956-08/1956	C0200
			CW	I				08/1956-08/1956	C0200

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
1352	Carson River East Fork at Highway 4	CA 003	NWNE27 10N20E	384123/1194545	1	.00	5480.00	.00
1343	Monitor Creek at mouth	CA 003	NWNE01 09N20E	383937/1194331	2	.00	5680.00	.00
1354	Indian Creek above bridge	CA 003	NESE33 10N20E	384038/1194641	2	.00	6080.00	.00
1357	East Fork Carson River near Markleeville	CA 003	NWNE27 10N20E	384123/1194552	1	.00	5494.00	.00
1364	Hot Springs Creek near Markleeville	CA 003	SENE23 10N19E	384159/1195101	2	.00	5910.00	14.38
1369	Hot Springs Creek below Shay Creek, near Markleeville	CA 003	SENW19 10N20E	384155/1194933	2	.00	5720.00	.00
1371	Musser and Jarvis Creeks	CA 003	NWNW29 10N20E	384124/1194834	3	.00	5680.00	.00
1375	Spratt Creek	CA 003	SENW29 10N20E	384104/1194830	3	.00	5760.00	.00
1378	Hot Springs Creek at Markleeville	CA 003	NENE29 10N20E	384125/1194750	2	.00	5600.00	26.7P
1390	Pleasant Valley Creek above Raymond Canyon Creek, near Markleeville	CA 003	NESE12 09N19E	383843/1194959	3	.00	5955.00	14.57
1392	Pleasant Valley Creek below Raymond Canyon Creek	CA 003	SWSE32 10N20E	383945/1194810	3	.00	5860.00	.00
1393	Pleasant Valley Creek near Markleeville	CA 003	NENW28 10N20E	384122/1194721	3	.00	5580.00	25.13
1396	Markleeville Creek at Markleeville	CA 003	SWSE21 10N20E	384136/1194652	2	.00	5500.00	53.91
1397	Markleeville Creek et Markleeville	CA 003	SESE21 10N20E	384137/1194639	2	.00	5501.00	.00
1398	Millberry Creek at Markleeville	CA 003	SWNE21 10N20E	384200/1194702	3	.00	5620.00	5.30
1402	East Fork Carson River below Markleeville Creek, near Markleeville	CA 003	SWNE15 10N20E	384253/1194550	1	114.77	5370.80	276.38
1410	East Fork Carson River at California-Nevada State line	CA 003	SWNW25 11N20E	384722/1194141	1	105.78	5140.00	.00
1412	East Fork Carson River at State line	NV 005	SENE23 11N20E	384809/1194153	1	104.61	5100.00	.00
1417	Leviathan Creek	CA 003	NENW15 10N21E	384306/1193932	3	.00	6600.00	.00
1419	Leviathan Creek	CA 003	SWSW02 10N21E	384408/1195843	3	.00	6280.00	.00
1423	Mountaineer Creek	CA 003	NENW11 10N21E	384400/1193833	4	.00	6370.00	.00
1426	Bryant Creek near Gardnerville	NV 005	NENW30 11N21E	384740/1194021	2	.00	5390.00	31.50
1432	Fredricksburg Creek	NV 005	SWSW12 11N20E	384937/1194137	2	.00	5060.00	.00
1437	East Fork Cerson River near Gardnerville	NV 005	SWNE02 11N20E	385045/1194211	1	.00	.00	356.41

for the Truckee and Carson River basins--Continued

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Data availability Computer files	Operating History	Seq. No.
CDWR	G83420.2		TW	R				09/1958-09/1961	C0210
			TW	M				07/1971-07/1971	C0210
			CW	M				07/1971-07/1971 09/1958-05/1963	C0210
			CW	R				09/1958-05/1965 09/1970-09/1977	C0210
			CW	M				05/1963-04/1970	C0210
CDWR	G83475.01		TW	I				08/1956-08/1956	C0220
			CW	I				08/1956-08/1956	C0220
UDRR	83	RESEAR	W	M	D	BJC7802		08/1973-10/1975	C0230
			NW	M	D			08/1973-10/1975	C0230
USGS	10305500		GF	M	D		W	00/1910-00/1931	C0240
CDWR	G83420		CW	I				08/1956-08/1956	C0240
			TW	I				08/1956-08/1956	C0240
USGS	10306000		GF	M	D		W	00/1946-00/1957	C0250
CDWR	G83240								C0250
CDWR	G83235.01		TW	I				08/1956-08/1956	C0260
UDRR	81	RESEAR	SW	M	D	BJC7802		08/1973-10/1975	C0270
			NW	M	D			08/1973-10/1975	C0270
UDRR	82	RESEAR	SW	M	D	BJC7802		08/1973-03/1975	C0280
			SW	M	D			05/1975-05/1976	C0280
			NW	M	D			08/1973-05/1976	C0280
USGS	10306500		GF	M	D		W	00/1911-00/1930	C0290
CDWR	G83185								C0290
USGS	1030700		GF	M	D		W	00/1946-00/1950	C0300
CDWR	G83340								C0300
CDWR	G83302.01		TW	I				08/1956-08/1956	C0310
			CW	I				08/1956-08/1956	C0310
USGS	10307500		GF	M	D		W	00/1910-00/1911	C0320
CDWR	G83300								C0320
USGS	10308000		GF	M	D		W	00/1910-00/1931	C0330
CDWR	G83150								C0330
CDWR	G83148.01		CW	M				05/1971-07/1971	C0340
			TW	I				08/1956-08/1956 05/1971-05/1971	C0340
USGS	10308100		PG		A			00/1963	C0350
CDWR	G83145								C0350
USGS	10308200		GF	M	A		W	00/1960	C0360
CDWR	G83140								C0360
USGS	10308500		GF	M	D		W	00/1911-00/1914	C0370
CDWR	G83100								C0370
NDEP	N310010								C0380
NDEP	N310009								C0390
UDRR	80	RESEAR	SW	M	D	BJC7802		08/1973-06/1974	C0400
			NW	M	D			08/1973-06/1974	C0400
UDRR	79	RESEAR	BW	M	D	BJC7802		08/1973-06/1975	C0410
			BW	M	D			08/1973-10/1975	C0410
USGS	10308800		GF	M	D		W	00/1961-00/1969	C0420
CDWR	C83070		PF		A			00/1970	C0420
UDRR	76	RESEAR	SW	I	D	BJC7802		09/1973-09/1973	C0430
			NW	I	D			09/1973-09/1973	C0430
USGS	10309000		GF	M	A		W	00/1890-00/1893 00/1900-00/1905 00/1906-00/1906	C0440
								00/1908-00/1910 00/1917-00/1917 00/1924-00/1929	C0440
								00/1935-00/1937 00/1939	C0440
			PF		A			00/1970	C0440

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
1440	Bodie Flat tributary near Gardnerville	NV 005	NENW09 11N21E	385008/1193755	3	.00	5680.00	.46P
1448	East Fork Carson River at Highway 395	NV 005	NWNW25 12N20E	395248/1194126	1	.00	4900.00	.00
1450	Pine Nut Creek	NV 005	NWNE36 12N21E	385156/1193426	2	.00	6180.00	.00
1467	Indian Creek Reservoir near Dam	CA 003	SENE04 10N20E	384505/1194631	2	.00	5600.00	.00
1468	Indian Creek Reservoir at outlet	CA 003	SENE04 10N20E	384509/1194629	2	.00	5595.00	.00
1474	Indian Creek at East Fork Carson River	NV 005	NWNE26 12N20E	385247/1194206	2	.00	4905.00	.42
1488	East Fork Carson River at Country Club Bridge	NV 005	NESE10 12N30E	385452/1194300	1	93.07	4820.00	.00
1501	East Fork Carson River at Centerville Lane	NV 005	NWSW04 12N20E	385549/1194447	1	91.02	4760.00	.00
1513	East Fork Carson River at Minden	NV 005	NESW31 13N20E	385648/1194646	1	88.74	4716.1P	.00
1513	East Fork Carson River at Highway 88	NV 005	NESW31 13N20E	385648/1194646	1	88.74	.00	.00
1520	Cottonwood Slough at East Fork Carson River	NV 005	SESW30 13N20E	385719/1194659	2	.00	4700.00	.00
1525	East Fork Carson River above Martin Slough	NV 005	SESW24 13N19E	385811/1194755	1	.00	4680.00	.00
1527	Martin Slough at East Fork Carson River	NV 005	SESW24 13N19E	385821/1194806	2	.00	4680.00	.00
1527	Minden Sewage Treatment Plant discharge to East Fork Carson River	NV 005	SESW24 13N19E	385814/1194754	2	.00	4680.00	.00
1530	East Fork Carson River at Muller Lane	NV 005	SESW24 13N19E	385815/1194758	1	86.89	4688.00	.00
1531	East Fork Carson River at Williams Slough	NV 005	NESW24 13N19E	385821/1194806	1	.00	4680.00	.00
1539	East Fork Carson River at West Fork Carson River	NV 005	SWNW14 13N19E	385927/1194923	1	.00	4670.00	.00
1576	West Fork Carson River	CA 003	NENE19 10N19E	384218/1195528	2	.00	7440.00	.00
1587	Red Lake Creek at Highway 88	CA 003	SENW13 10N18E	384247/1195719	3	.00	7470.00	.00
1601	Willow Creek near mouth in Hope Valley	CA 003	SWNE24 11N18E	384713/1195455	3	.00	7100.00	.00
1610	West Fork Carson River about Woodfords	CA 003	SWNW31 11N19E	384634/1195347	2	.00	6860.00	.00
1651	West Fork Carson River at Woodfords	CA 003	NWSE34 11N19E	384611/1194958	2	.00	.00	.00
1681	West Fork Carson River near Highway 88	CA 003	SESE18 11N20E	384837/1194625	2	.00	5085.00	.00
1715	West Fork Carson River at Dresslarville Road	NV 005	SESW29 12N20E	385201/1194536	2	.00	4796.00	.00
1738	West Fork Carson River at Centerville Lane	NV 005	SESE12 12N19E	385438/1194729	2	.00	4715.00	.00
1741	Middle Rocky Slough at West Fork Carson River	NV 005	NESE12 12N19E	385454/1194724	3	.00	4710.00	.00
1748	Rocky Slough at West Fork Carson River	NV 005	SENE12 12N19E	385513/1194729	3	.00	4710.00	.00

for the Truckee and Carson River basins--Continued

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Computer files	Operating History			Seq. No.
CDWR	G83050										C0450
NDEP	N310011										C0460
UDRR	78	RESEAR	SW	M	D	BJC7802		01/1975-00/1976			C0470
			NW	M	D			01/1975-05/1976			C0470
CDWR	G8R845.0		CW	I				04/1977-04/1977			C0480
	946.6										C0480
CDWR	G83040.00		CW	I				04/1973-04/1973			C0490
NDEP	N310140										C0500
NDEP	N310137										C0510
NDEP	N310136										C0520
USGS	10309100										C0530
NDEP	N310152										C0530
NDEP	N310138										C0540
NDEP	N310160										C0550
NDEP	N310139										C0560
USGS	3858141194										C0570
	75401										C0570
NDEP	N310012										C0580
USGS	3858151194										C0580
	75801										C0580
NDEP	N310093										C0590
NDEP	N310141										C0600
UDRR	77	RESEAR	BM	W	D	BJC7802		08/1973-05/1976			C0610
			BM	W	D			08/1973-05/1976			C0610
CDWR	G82415.01		TW	I				08/1956-08/1956			C0610
CDWR	G82411.75		TW	I				08/1956			C0620
CDWR	G82405.10		TW	I				08/1956-08/1956			C0630
USGS	10309500		GF	M	D		W	00/1946-00/1951			C0640
CDWR	G82400										C0640
USGS	10310000		GF	M	A		W	00/1890-00/1892	00/1900-00/1901	00/1907-00/1920	C0650
								00/1910-00/1911	00/1938		C0650
CDWR	G82300		TW	R				05/1971-05/1971	09/1958-09/1961		C0650
			CW	R				09/1958-05/1964	09/1969-09/1977		C0650
			CW	M				07/1962-09/1969			C0650
			CW	M				08/1958-07/1963			C0650
NDEP	N310008										C0660
NDEP	N310163										C0670
NDEP	N310142										C0680
NDEP	N310143										C0690
NDEP	N310144										C0700

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
?	Heise Company Ditch at West Fork Carson River	NV 005	NWNE12 12N19E	385524/1194741	3	.00	4710.00	.00
1754	West Fork Carson River at Mottsville Lane	NV 005	NESW01 12N19E	385556/1194758	2	.00	4700.00	.00
1757	Henningson Slough at West Fork Carson River	NV 005	SENW01 12N19E	385604/1194757	3	.00	4700.00	.00
1763	St. Louis Ditch at West Fork Carson River	NV 005	NWSW36 13N19E	385636/1194811	3	.00	4700.00	.00
1775	West Fork Carson River at Muller Lane	NV 005	SESW23 13N19E	385815/1194904	2	.00	4678.00	.00
1783	Middle River Ditch near West Fork Carson River	NV 005	NWSW14 13N19E	385918/1194929	3	.00	4670.00	.00
1786	West Fork Carson River at Brockliss Slough	NV 005	NWSW14 13N19E	385920/1194931	2	.00	4670.00	.00
1807	Brockliss Slough at Headwater, at West Fork Carson River	NV 005	NWNW29 12N20E	385241/1194558	3	.00	4770.00	.00
1813	West Brockliss Slough at Highway 88	NV 005	SWNE19 12N20E	385321/1194642	3	.00	4740.00	.00
1824	Brockliss Slough at Centerville Lane	NV 005	SESW12 12N19E	385438/1194801	3	.00	4710.00	.00
1832	West Brockliss Slough at Mottsville Lane	NV 005	SENE02 12N19E	385556/1194825	3	.00	4700.00	.00
1851	Johnson Slough at mouth	NV 005	NWSE34 13N19E	385642/1194953	4	.00	4690.00	.00
1855	West Brockliss Slough above East Brockliss Slough	NV 005	SWNE34 13N19E	385700/1195003	3	.00	4690.00	.00
1861	Daggett Creek	NV 005	NWNW28 13N19E	385756/1195131	4	.00	5780.00	.00
1862	Daggett Creek near Genoa	NV 005	SWNE28 13N19E	385753/1195056	4	.00	5100.P	3.82
1863	Daggett Creek at Foothill Road	NV 005	NWNW27 13N19E	385755/1195022	4	.00	4720.00	.00
1867	West Brockliss Slough at Muller Lane	NV 005	SESW22 13N19E	385817/1195007	3	.00	4680.00	.00
1791	East Brockliss Slough at West Brockliss Slough	NV 005	NWNE34 13N19E	385702/1195001	4	.00	4690.00	.00
1795	East Brockliss Slough at Muller Lane	NV 005	SWSE22 13N19E	385817/1194954	4	.00	4676.00	.00
1798	Brockliss Slough at West Fork Carson River	NV 005	NESE15 13N19E	385922/1194935	3	.00	4670.00	.00
1803	Carson River at Genoa	NV 005	SWSW11 13N19E	385953/1194927	1	.00	4660.P	570.P
?	Hollister Slough at Carson River	NV 005	NENE10 13N19E	390035/1194942	2	.00	4665.00	.00
1883	Round Hill Sewage Treatment Plant discharge to Williams Slough	NV 005	NESW24 13N19E	385824/1194807	2	.00	4680.00	.00
1887	Ambrosetti Return at Carson River	NV 005	SWSW30 14N20E	390235/1194701	2	.00	4650.00	.00
1890	Carson River at Cradlebaugh Bridge	NV 005	NESW30 14N20E	390252/1194645	1	77.74	4650.00	.00
1892	Incline Sewage Treatment Plant discherge near Snyder's Ranch	NV 005	NESE10 14N19E	390523/1194931	3	.00	5165.00	.00
1893	Water Canyon	NV 005	?WSW15 14N19E	390417/1195027	3	.00	5185.00	.00
1902	Incline Sewage Treatment Plant discharge to Carson River	NV 005	SWSW17 14N20E	390426/1194604	1	.00	4640.00	.00

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Computer files	Operating History	Seq. No.
NDEP	N310145								C0710
NDEP	N310146								C0720
NDEP	N310147								C0730
NDEP	N310148								C0740
NDEP	N310165								C0750
NDEP	N310150								C0760
NDEP	N310149								C0770
NDEP	N310130								C0780
NDEP	N310131								C0790
NDEP	N310161								C0800
NDEP	N310132								C0810
NDEP	N310133								C0820
NDEP	N310162								C0830
UDRR	75	RESEAR	SW	M	D	BJC7802		09/1973-06/1975	C0840
			NW	M	D			09/1973-10/1975	C0840
USGS	10310400		GF	M	A		M	00/1965	C0850
			LF		D			00/1965	C0850
CDWR	G81800								C0850
NDEP	N310007								C0860
NDEP	N310060								C0870
NDEP	N310134								C0880
NDEP	N310062								C0890
NDEP	N310135								C0900
USGS	10310405								C0910
NDEP	N310013								C0910
NDEP	N310166								C0920
USGS	3858241194								C0930
	80701								C0930
NDEP	N310151								C0940
NDEP	N310014								C0950
USGS	3902521194								C0950
	64401								C0950
USGS	3905231194								C0960
	93101								C0960
UDRR	74	RESEAR	SW	M	D	BJC7802		09/1973-03/1975	C0970
			SW	W	D			05/1975-08/1975	C0970
			NW	M	D			09/1973-08/1975	C0970
USGS	3904261194								C0980
	60401								C0980

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
1914	Cleer Creek near Carson City	NV 005	NENW01 14N19E	390649/1194754	2	.00	4977.00	15.5P
1916	Clear Creek	NV 005	NENW06 14N20E	390646/1194658	2	.00	4790.00	.00
1922	Clear Creek at Carson River	NV 005	NENE09 14N20E	390549/1194401	2	.00	4635.00	.00
1928	Carson River near Carson City	NV 510	SWNW02 14N20E	390626/1194247	1	.00	.00	.00
1931	Carson River at Pinion Hills Bridge near New Empire	NV 510	NENW26 15N20E	390831/1194215	1	.00	4610.00	.00
1945	Kings Canyon Creek near Carson City	NV 510	NENE23 15N19E	390915/1194824	2	.00	5180.P	4.06P
1946	Kings Canyon Creek	NV 510	NWNW24 15N19E	390926/1194812	2	.00	5055.00	.00
1952	Ash Canyon Creek	NV 510	NWSW12 15N19E	391037/1194823	3	.00	5140.00	.00
1953	Ash Canyon Creek near Carson City	NV 510	NWSW12 15N19E	391032/1194816	3	.00	5055.00	5.2P
1965	Carson City Sewage Treatment Plant discharge to Carson River	NV 510	NESW11 15N20E	391036/1194225	2	.00	4600.00	.00
1968	Mexican Ditch at Carson River	NV 510	SENW11 15N20E	391046/1194232	2	.00	4600.00	.00
1972	Irrigation Return downstream from Mexican Ditch Return	NV 510	SENW11 15N20E	391054/1194232	2	.00	4600.00	.00
1976	Carson River at Deer Run Road, near Carson City	NV 510	SWNW12 15N20E	391051/1194143	1	63.38	4569.30	958.29
1976	Carson River near New Empire	NV 510	SWNW12 15N2?E	391051/1194143	1	63.38	4569.30	958.29
1980	Brunswick Canyon near New Empire	NV 510	NWNE13 15N20E	391016/1194110	2	.00	4680.00	.00
1983	Carson River near New Empire	NV 510	?WSE12 15N20E	391030/1194103	1	.00	4580.00	.00
2008	Carson River at Dayton Bridge	NV 019	NESE23 16N21E	391413/1193523	1	52.80	4340.00	.00
?	Carson River at Riverview Trailer Park	NV 019	SENE23 16N21E	391421/1193524	1	.00	4340.00	.00
2016	Carson River at Altran Ranch Corrals	NV 019	SWSE05 16N22E	391655/1193206	1	.00	4300.00	.00
2018	Carson River at Altran Ranch Irrigation Return	NV 019	SWNW04 16N22E	391703/1193128	1	.00	4300.00	.00
2024	Koch Return at Carson River	NV 019	SESE31 17N23E	391219/1192612	2	.00	4260.00	.00
2029	Carson River below Table Mountain Dam	NV 019	NESE04 16N23E	391646/1192404	1	.00	4270.00	.00
2034	Carson River at Buckland Diversion	NV 019	NWSE32 17N24E	391734/1191850	1	.00	4230.00	.00
2047	Buckland Ditch near Fort Churchill	NV 019	NWSE32 17N24E	391734/1191841	2	.00	4220.P	.00
2035	Carson River near Fort Churchill	NV 019	NWSE32 17N24E	391732/1191846	1	30.82	.00	450.P
2038	Adrian Valley tributary neer Wabuska	NV 019	NWSE31 16N25E	391217/1191301	3	.00	4560.00	.00
2039	Adrian Valley tributary near Weeks	NV 019	SWSW30 16N25E	391306/1191342	3	.00	4580.00	.12P
2044	Carson River at Weeks	NV 019	NESE35 17N24E	391736/1191502	1	.00	4200.00	.00
2051	Lake Lahontan at Carson River mouth	NV 019	NESW22 17N25E	391921/1191004	1	.00	4160.00	.00
2053	Lake Lahontan at Silver Springs	NV 019	?WNW20 18N25E	392448/1191232	1	.00	4160.00	.00
2052	Lahontan Reservoir Tributary near Silver Springs	NV 019	SESW32 18N24E	392242/1191901	2	.00	4500.00	4.39P

for the Truckee and Carson River basins--Continued

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data availability Pub. No.	Computer files	Operating History		Seq. No.
USGS	10310500		F	M			W	00/1948-00/1962		C0990
			PF		A			00/1963		C0990
CDWR	G81500									C0990
UDRR	73	RESEAR	SW	M	D	BJC7802		09/1973-09/1975		C1000
			NW	M	D			09/1973-09/1975		C1000
NDEP	N310153									C1010
USGS	10311000		GF	M	A		W	00/1939		C1020
CDWR	G81450									C1020
NDEP	N310167									C1020
NDEP	N310021									C1030
USGS	10311100									C1040
UDRR	72	RESEAR	SW	M	D	BJC7802		09/1973-09/1975		C1050
			NW	M	D			09/1973-09/1975		C1050
UDRR	71	RESEAR	SW	M	D	BJC7802		09/1973-03/1975		C1060
			SW	W	D			05/1973-05/1975		C1060
			NW	M	D			09/1973-09/1975		C1060
USGS	10311200									C1070
USGS	3910361194									C1080
	22501									C1080
NDEP	N310154									C1090
NDEP	N310155									C1200
USGS	10311400									C1210
NDEP	N310015									C1220
USGS	10311450									C1230
USGS	10311500		GF	M	D		W	00/1895-00/1895	00/1900-00/1923	C1240
CDWR	G81400									C1240
NDEP	N310022									C1250
NDEP	N310156									C1260
NDEP	N310157									C1270
NDEP	N310168									C1280
NDEP	N310158									C1290
NDEP	N310169									C1300
NDEP	N310159									C1310
USGS	10311900		GF	M	A		W	00/1962		C1320
USGS	10312000		GF	M	A		W	00/1911		C1330
USGS	10312012		PF		A			00/1968		C1340
USGS	10312015		PF		A			00/1968		C1350
NDEP	N310016									C1360
NDEP	N310017									C1370
NDEP	N310018									C1380
USGS	10312050		PF		A			00/1962		C1390

SUPPLEMENTAL DATA B.- Inventory of hydrologic data sites

Key No.	Site name	State	Landline location	Latitude/ longitude	Stream order	River mile	Altitude	Drainage area
2054	Lake Lahontan at Narrows	NV 001	SESE24 18N25E	392413/1190722	1	.00	4160.00	.00
2057	Lake Lahontan at Dam	NV 001	SESE33 19N26E	392741/1190359	1	.00	4150.00	.00
2056	Lahontan Reservoir near Fallon	NV 001	SWSE33 19N26E	392746/1190402	1	.00	4150.00	.00
2058	Carson River below Lahontan Reservoir, near Fallon	NV 001	SWSE34 19N26E	392751/1190253	1	.00	4040.P	800.55
2060	Stillwater Diversion Canal near Fallon	NV 001	NENE34 19N30E	392824/1183600	2	.00	3920.00	.00
2061	Stillwater Slough Cutoff Drain near Stillwater	NV 001	SESW32 20N31E	393303/1183144	3	.00	3880.00	.00
2062	Paiute Diversion Drain near Stillwater	NV 001	SWNW36 20N30E	393327/1183423	2	.00	3890.00	.00
2063	Indian Lake Canal near Fallon	NV 001	NWNE26 20N29E	393428/1184135	2	.00	3920.00	.00
2064	Indian Lake Canal below East Lake, near Stillwater	NV 001	NENE14 20N30E	393621/1183447	2	.00	3890.00	.00
2065	Paiute Drain at Wildlife Entrance, near Stillwater	NV 001	SWSW07 20N31E	393634/1183322	2	.00	3890.00	.00
2066	Carson River below Fallon	NV 001	SESW19 21N30E	394000/1183931	1	.00	3880.P	.00

for the Truckee and Carson River basins--Continued

Operating agency	Agency site No.	Operation type	Type of data	Coll. frequency	Current status	Data Pub. No.	availability Computer files	Operating History		Seq. No.
NDEP	N310019									C1400
NDEP	N310020									C1410
USGS	10312100		GF	M	A		W	00/1917		C1420
USGS	10312150		GF	M	A		W	00/1966		C1430
USGS	10312210		GF	M	A		W	00/1966		C1440
USGS	10312220		GF	M	A		W	00/1966		C1450
USGS	10312240		GF	M	A		W	00/1966		C1460
USGS	10312260		GF	M	A		W	00/1966		C1470
USGS	10312265									C1480
USGS	10312270									C1490
USGS	10312280		F	M			W	00/1966		C1500