NID PLAN FOR WATER WORKSHOP #3

WATER SERVICE AREA OVERVIEW

Plan For Water Workshop #3
Water Service Area Overview

- This is an open forum workshop
  - Feel free to ask questions as we go
  - Zoom attendees; raise hand on zoom app, or press *9 on your phone
    - We will call on you to unmute and join the conversation

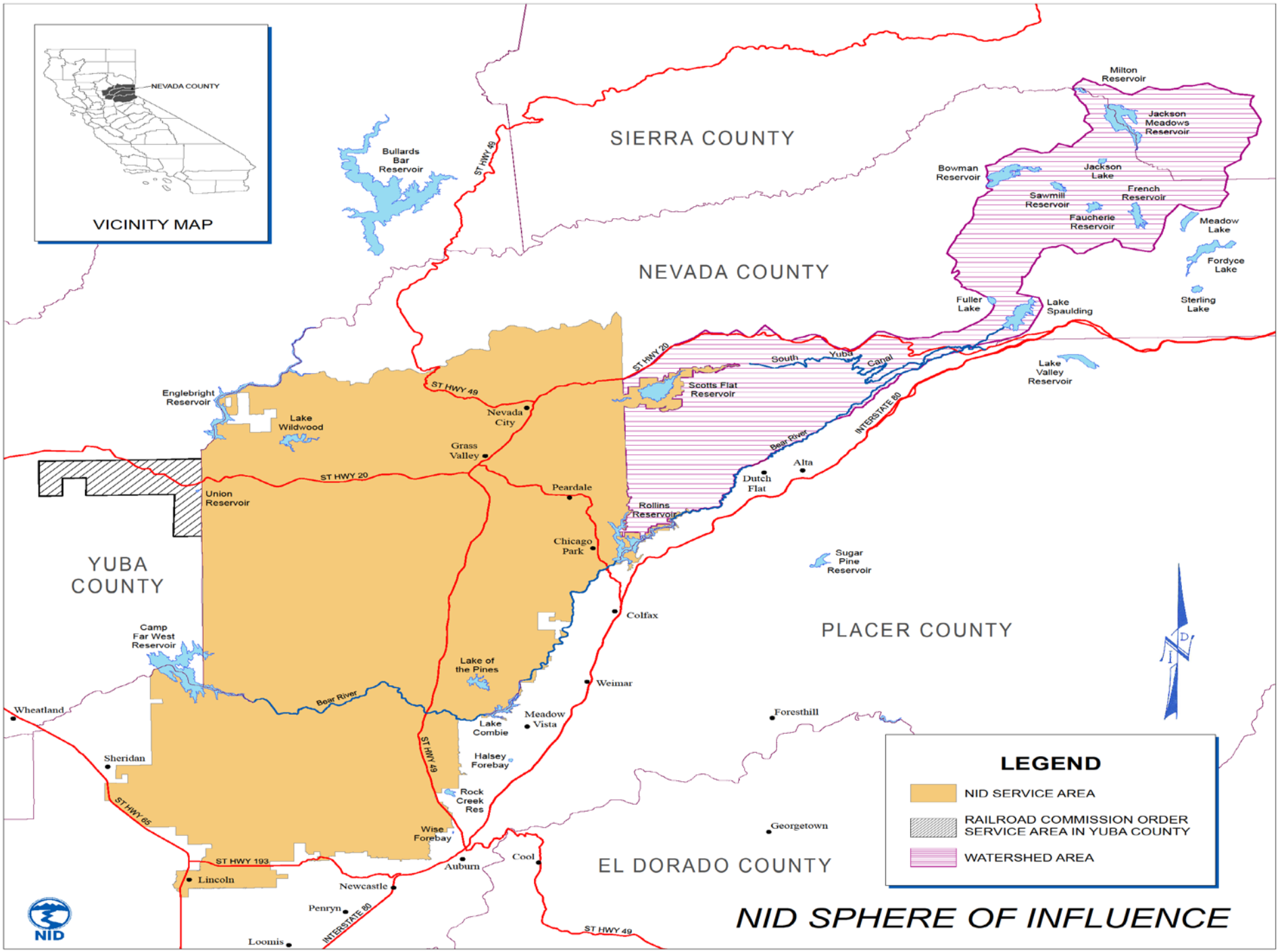
NID Lands Divided by Watershed Collection and Service Area

Watershed Area

- Generally known as NID's Mountain Division
- Operated and Maintained by NID's Hydroelectric Division

Service Area

- Lands where NID provides water delivery for consumptive uses
- Operated and maintained by NID's Water Division


NEVADA COUNTY
VICINITY MAP
SIERRA COUNTY
NEVADA COUNTY
YUBA COUNTY
PLACER COUNTY
EL DORADO COUNTY
Milton Reservoir
Jackson Meadows Reservoir
Bullards Bar Reservoir
Bowman Reservoir
Jackson Lake
Sawmill Reservoir
French Reservoir
Faucherie Reservoir
Meadow Lake
Fordyce Lake
Sterling Lake
Fuller Lake
Lake Spaulding
Lake Valley Reservoir
ST HWY 49
ST HWY 20
South Yuba Canal
Scotts Flat Reservoir
Englebright Reservoir
Lake Wildwood
Nevada City
Grass Valley
Union Reservoir
Peardale
Rollins Reservoir
Chicago Park
Bear River
INTERSTATE 80
Dutch Flat
Alta
Sugar Pine Reservoir
Colfax
Weimar
Camp Far West Reservoir
Lake of the Pines
Wheatland
Lake Combie
Meadow Vista
Foresthill
Sheridan
Halsey Forebay
Rock Creek Res
Wise Forebay
ST HWY 65
ST HWY 193
Lincoln
Auburn
Cool
Georgetown
Newcastle
Penryn
Loomis
LEGEND
NID SERVICE AREA
RAILROAD COMMISSION ORDER SERVICE AREA IN YUBA COUNTY
WATERSHED AREA
NID
NID SPHERE OF INFLUENCE

Two Halves of NID

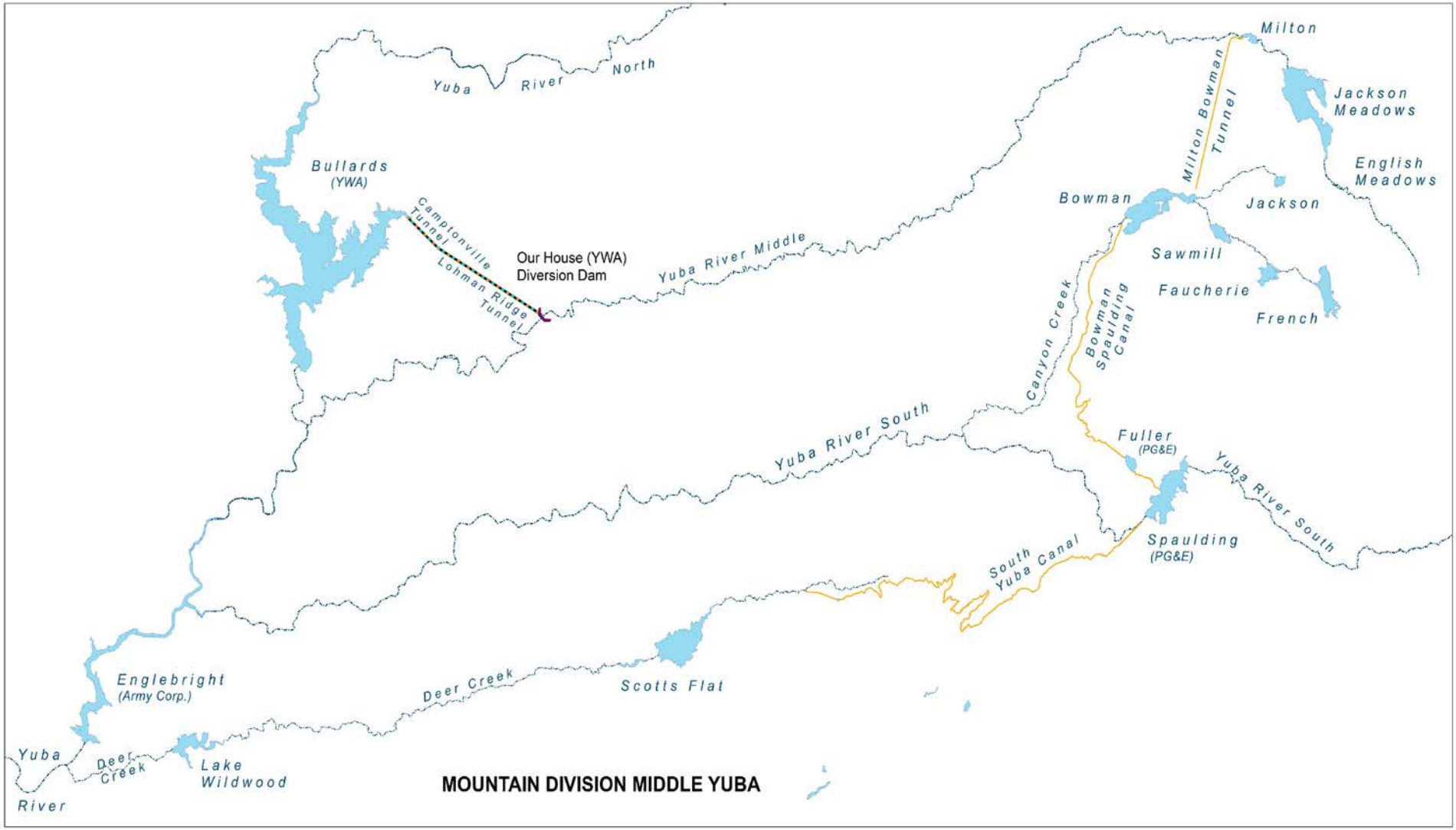
Watershed Lands

- 70k acres
- Lands Purchased With Water Rights
- Area of interest in NID SOI
- 9 Storage Res
- 270,089 Acre Feet Total Volume
- 24.4 Miles of Canal, Flume and Tunnel
- 7 Powerhouses
  - 82.2 Megawatts Max Cap.
- 19 Campgrounds and Dispersed Camping
- Roughly 300,000 Annual Visitors

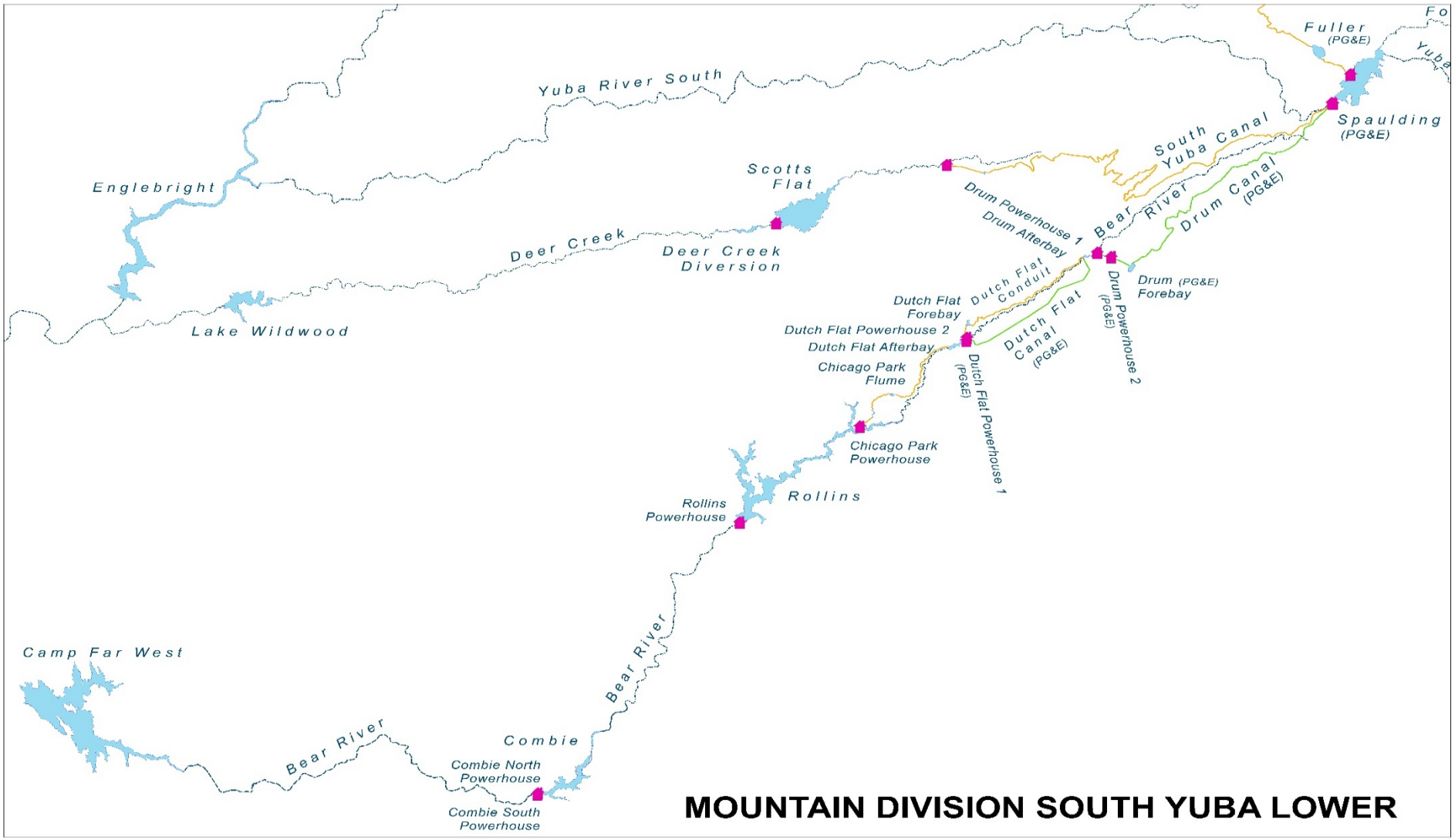
Water Distribution Service Area

- 287,000 Acres of Land
- Lands Included in Water Rights Service Area for Consumptive Use
- > 500 Miles of Canal
- > 6,500 Raw Water Customers
- 8 Water Treatment Plants
  - 6 NID
  - 1 City of GV & 1 City of NC
- > 400 Miles Treated Water Pipes
- 19,600 NID Treated Water Connections
  - 5,520 local city connections
- Utilize Roughly 150,000 Acre Feet a Year

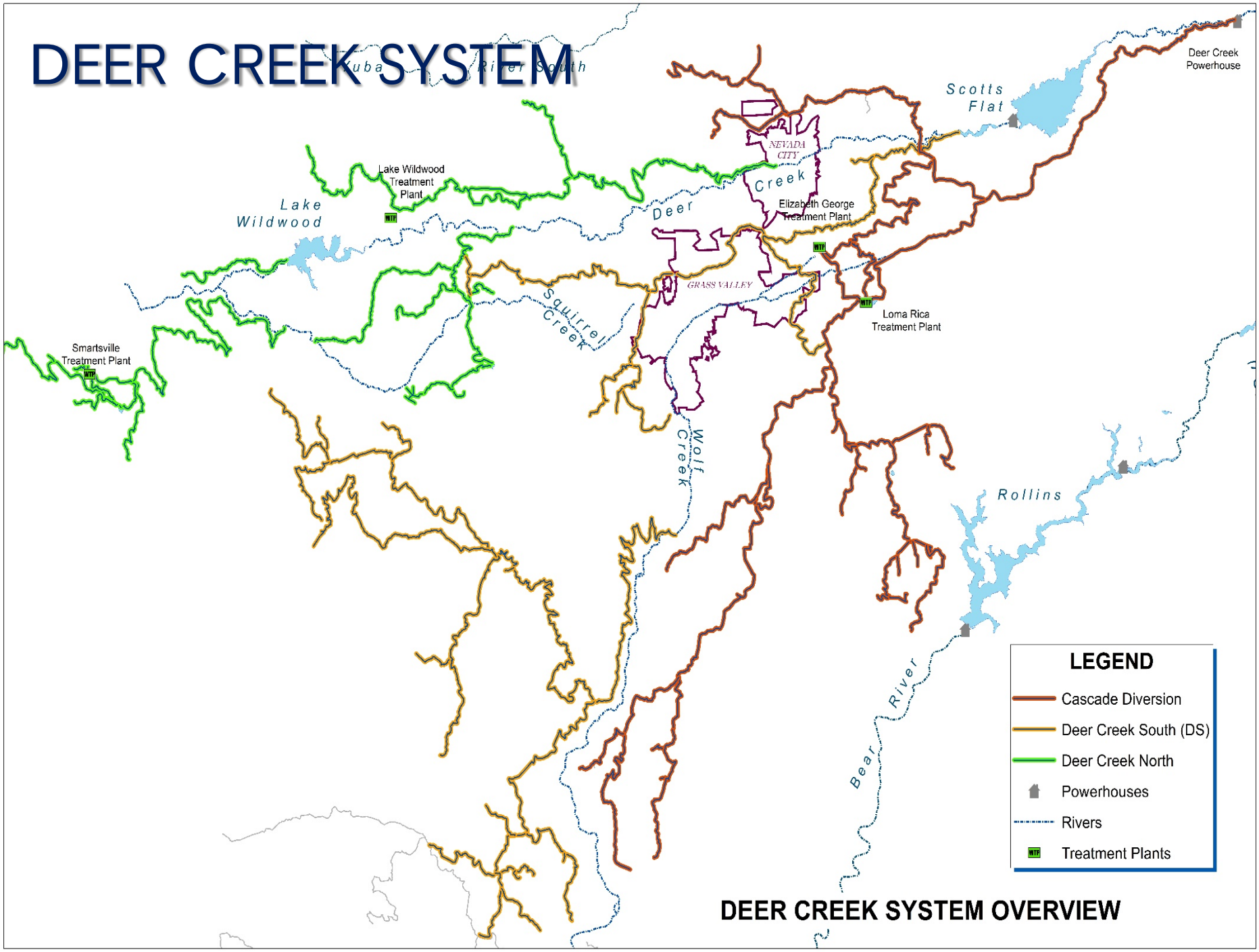
MIDDLE YUBA RIVER SYSTEM

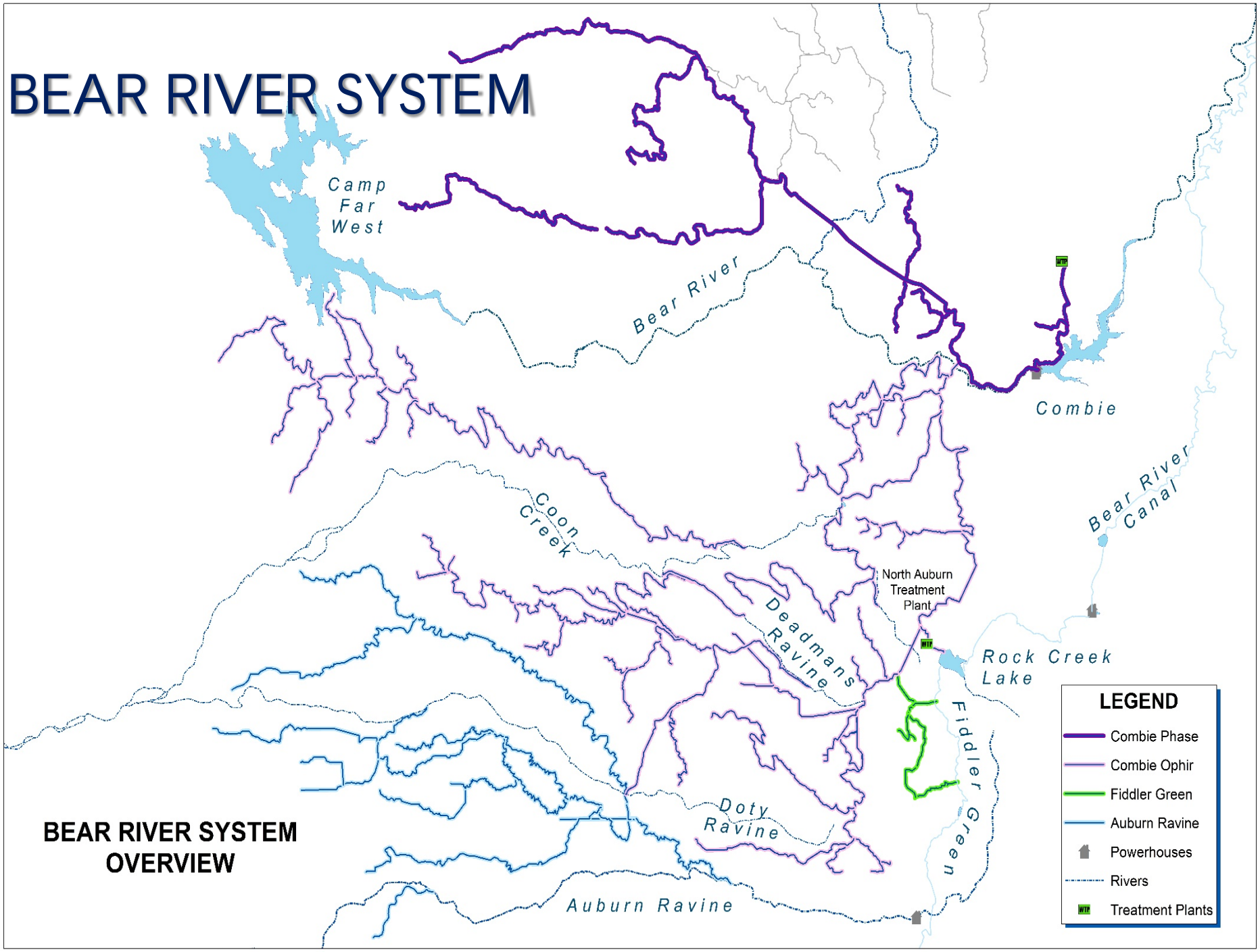


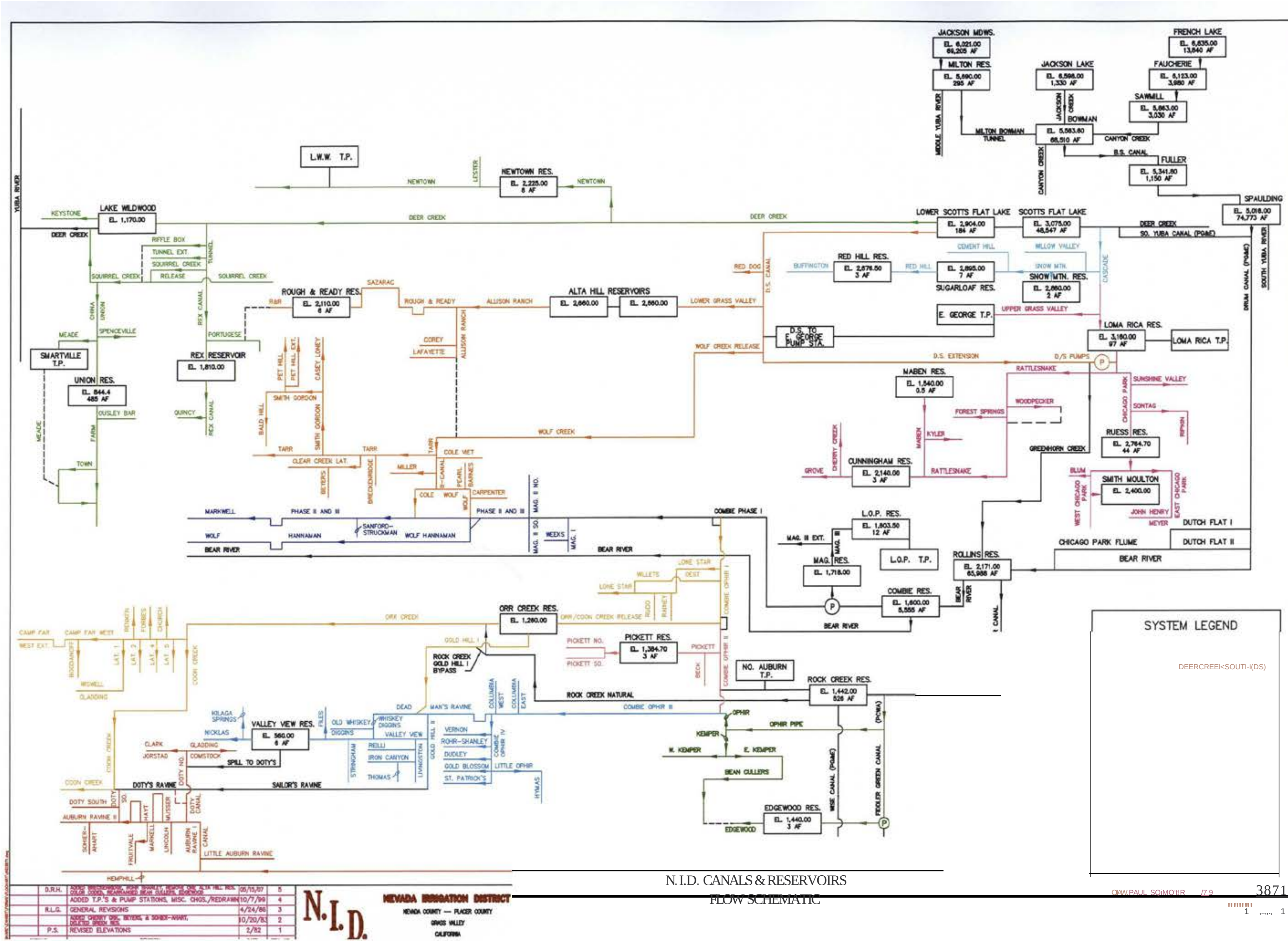
SOUTH YUBA RIVER SYSTEM (LOWER)



DEER CREEK SYSTEM




BEAR RIVER SYSTEM
Camp Far West
Bear River
Combie
Bear River Canal
Coon Creek
North Auburn Treatment Plant
Deadmans Ravine
Rock Creek Lake
Fiddler Green
Doty Ravine
Auburn Ravine
BEAR RIVER SYSTEM OVERVIEW
LEGEND
Combie Phase
Combie Ophir
Fiddler Green
Auburn Ravine
Powerhouses
Rivers
Treatment Plants


JACKSON MDWS.
EL. 6,021.00
69,205 AF
FRENCH LAKE
EL. 6,635.00
13,840 AF
MILTON RES.
EL. 5,690.00
295 AF
JACKSON LAKE
EL. 6,598.00
1,330 AF
FAUCHERIE
EL. 6,123.00
3,980 AF
SAWMILL
EL. 5,863.00
3,030 AF
BOWMAN
EL. 5,563.60
68,510 AF
MILTON BOWMAN TUNNEL
MIDDLE YUBA RIVER
JACKSON CREEK
CANYON CREEK
B.S. CANAL
FULLER
EL. 5,341.80
1,150 AF
SPAULDING
EL. 5,016.00
74,773 AF
L.W.W. T.P.
NEWTOWN RES.
EL. 2,225.00
8 AF
NEWTOWN
LESTER
YUBA RIVER
KEYSTONE
LAKE WILDWOOD
EL. 1,170.00
DEER CREEK
LOWER SCOTTS FLAT LAKE
EL. 2,904.00
184 AF
SCOTTS FLAT LAKE
EL. 3,075.00
48,547 AF
SO. YUBA CANAL (PG&E)
DRUM CANAL (PG&E)
SOUTH YUBA RIVER
RIFFLE BOX
TUNNEL EXT.
SQUIRREL CREEK
RELEASE
TUNNEL
ROUGH & READY RES.
EL. 2,110.00
6 AF
SAZARAC
ALTA HILL RESERVOIRS
EL. 2,660.00
EL. 2,660.00
ALLISON RANCH
LOWER GRASS VALLEY
RED DOG
D.S. CANAL
RED HILL RES.
EL. 2,676.50
3 AF
BUFFINGTON
RED HILL
CEMENT HILL
WILLOW VALLEY
SNOW MTN.
EL. 2,695.00
7 AF
SUGARLOAF RES.
SNOW MTN. RES.
EL. 2,660.00
2 AF
CASCADE
E. GEORGE T.P.
UPPER GRASS VALLEY
D.S. TO E. GEORGE PUMP STA.
LOMA RICA RES.
EL. 3,160.00
97 AF
LOMA RICA T.P.
WOLF CREEK RELEASE
D.S. EXTENSION
D/S PUMPS
SMARTVILLE T.P.
UNION RES.
EL. 844.4
485 AF
MEADE
SPENCEVILLE
CHINA
UNION
REX CANAL
PORTUGESE
REX RESERVOIR
EL. 1,810.00
OUSLEY BAR
QUINCY
FARM
TOWN
PET HILL
PET HILL EXT.
CASEY LONEY
COREY
LAFAYETTE
SMITH GORDON
BALD HILL
TARR
CLEAR CREEK LAT.
BEYERS
BRECKENRIDGE
MILLER
COLE VIET
B-CANAL
PEARL
BARNES
COLE
WOLF
CARPENTER
WOLF CREEK
MABEN RES.
EL. 1,540.00
0.5 AF
RATTLESNAKE
SUNSHINE VALLEY
WOODPECKER
FOREST SPRINGS
CHICAGO PARK
SONTAG
KYLER
RUESS RES.
EL. 2,764.70
44 AF
GREENHORN CREEK
CHERRY CREEK
CUNNINGHAM RES.
EL. 2,140.00
3 AF
GROVE
BLUM
SMITH MOULTON
EL. 2,400.00
WEST CHICAGO PARK
EAST CHICAGO PARK
JOHN HENRY
MEYER
DUTCH FLAT I
DUTCH FLAT II
CHICAGO PARK FLUME
MARKWELL
PHASE II AND III
SANFORD-STRUCKMAN
WOLF
HANNAMAN
WOLF HANNAMAN
BEAR RIVER
MAG. II NO.
MAG. II SO.
WEEKS
MAG. I
COMBIE PHASE I
L.O.P. RES.
EL. 1,803.50
12 AF
L.O.P. T.P.
MAG. III EXT.
MAG. RES.
EL. 1,718.00
ROLLINS RES.
EL. 2,171.00
65,988 AF
LONE STAR
WILLETS
COMBIE RES.
EL. 1,600.00
5,555 AF
ORR CREEK RES.
EL. 1,260.00
ORR CREEK
ORR/COON CREEK RELEASE
CAMP FAR WEST
CAMP FAR WEST EXT.
BOGDANOFF
BENNETT
FORBES
CHURCH
LAT. 1
LAT. 2
LAT. 3
LAT. 4
LAT. 5
COON CREEK
GLADDING
GOLD HILL I
ROCK CREEK GOLD HILL I BYPASS
PICKETT NO.
PICKETT SO.
PICKETT RES.
EL. 1,384.70
3 AF
PICKETT
BECK
NO. AUBURN T.P.
ROCK CREEK RES.
EL. 1,442.00
526 AF
ROCK CREEK NATURAL
COMBIE OPHIR II
COMBIE OPHIR III
DEAD MAN'S RAVINE
COLUMBIA WEST
COLUMBIA EAST
KILAGA SPRINGS
VALLEY VIEW RES.
EL. 560.00
6 AF
NICKLAS
CLARK
JORSTAD
COMSTOCK
SPILL TO DOTY'S
OLD WHISKEY DIGGINS
VALLEY VIEW
RELLI
IRON CANYON
STRINGHAM
THOMAS
LIVINGSTON
GOLD HILL II
VERNON
ROHR-SHANLEY
DUDLEY
GOLD BLOSSOM
LITTLE OPHIR
ST. PATRICK'S
HYMAS
OPHIR
OPHIR PIPE
KEMPER
W. KEMPER
E. KEMPER
BEAN CULLERS
WISE CANAL (PG&E)
FIDDLER GREEN CANAL
EDGEWOOD RES.
EL. 1,440.00
3 AF
EDGEWOOD
DOTY'S RAVINE
SAILOR'S RAVINE
DOTY SOUTH
AUBURN RAVINE II
LITTLE AUBURN RAVINE
HEMPHILL
SYSTEM LEGEND
NEVADA IRRIGATION DISTRICT
NEVADA COUNTY — PLACER COUNTY
GRASS VALLEY
CALIFORNIA
N.I.D.
ADDED T.P.'S & PUMP STATIONS, MISC. CHGS./REDRAWN 10/7/99 4
GENERAL REVISIONS 4/24/86 3
10/20/83 2
REVISED ELEVATIONS 2/82 1
N.I.D. CANALS & RESERVOIRS
FLOW SCHEMATIC
3871

Two Primary Distribution Supplies Water

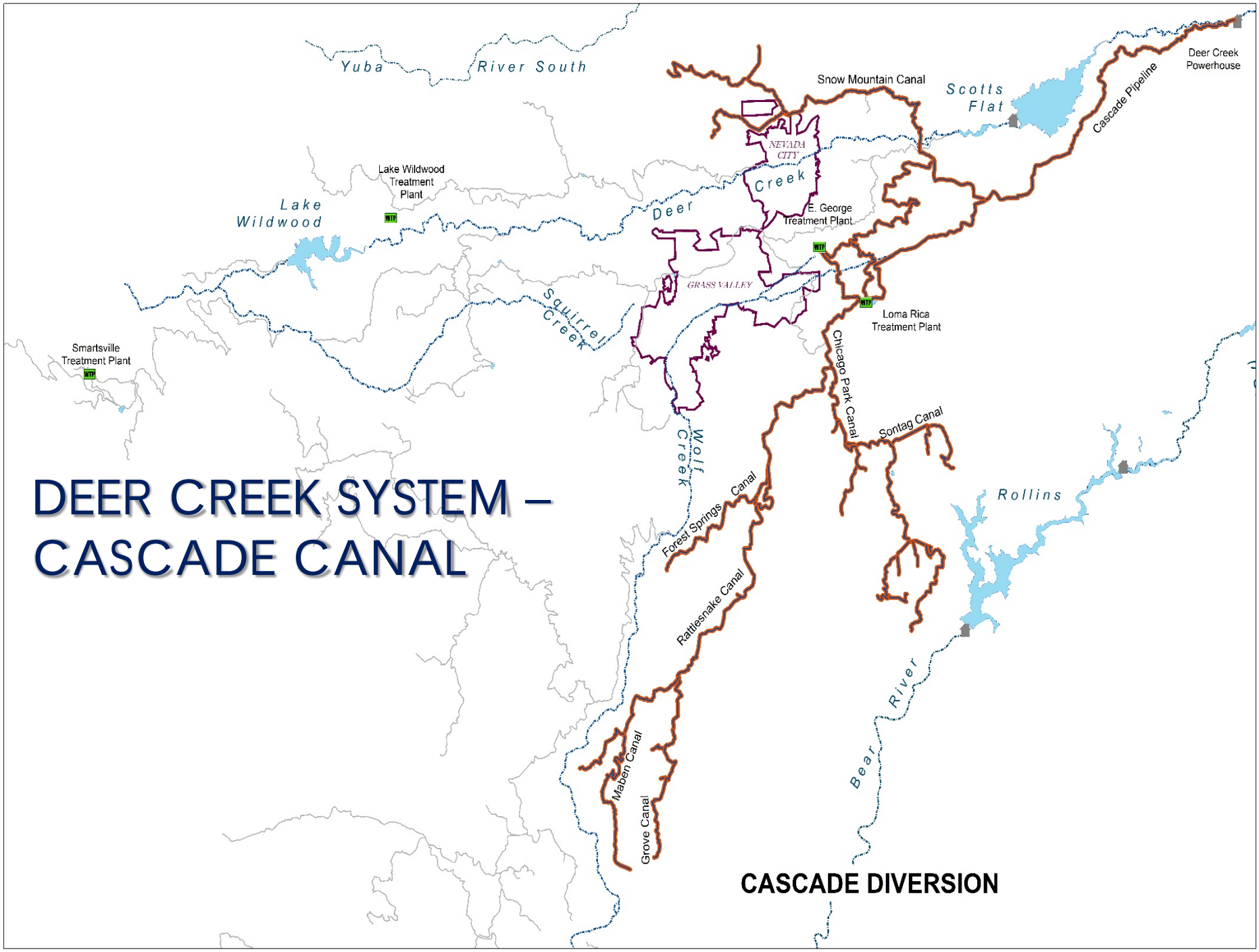
Deer Creek System

- Primary Supply to Nevada County
- 2019 Diversions 53,000 Acre-Feet
- Supplies 75 Canals
- 3,315 Raw Water Customers
  - 3,000 Summer Water Cust.
  - 315 Winter Water Cust.
- Supports 6 Potable Water Treatment Plants
- Supplies >18,260 Treated Water Connections
  - Population 52,300

Bear River System

- Primary Supply to Placer County
- 2019 Diversions 87,500 Acre-Feet
- Supplies 86 Canals
- 3,680 Raw Water Customers
  - 3,083 Summer Water Cust.
  - 597 Winter Water Cust.
- Supports 2 Potable Water Treatment Plants
- Supplies 5,074 Treated Water Connections
  - Population >15,000

Deer Creek Cascade Canal Diversion



DEER CREEK SYSTEM – CASCADE CANAL

Cascade Canal System Diversion

- Diversion Located Above Scotts Flat
  - Supplied via natural Deer Creek and imported SYC flows
  - Flows continuously measured and reported via SCADA
  - Average flows in 2019 = 32 CFS in summer &12.2 CFS in winter
  - Instream flow requirement of 10 CFS in winter and 3 CFS in summer (flows into Scotts Flat)
  - Supplies 31 Downstream canals covering a distance of > 76 Miles
  - Provides 1,401 summer irrigation water customers and 246 winter water customers
  - Is the main source of drinking water supply for Nevada City, Cascade Shores, Alta Sierra, and Chicago Park areas

Deer Creek Cascade Canal Diversion

Cascade Canal System Diversion

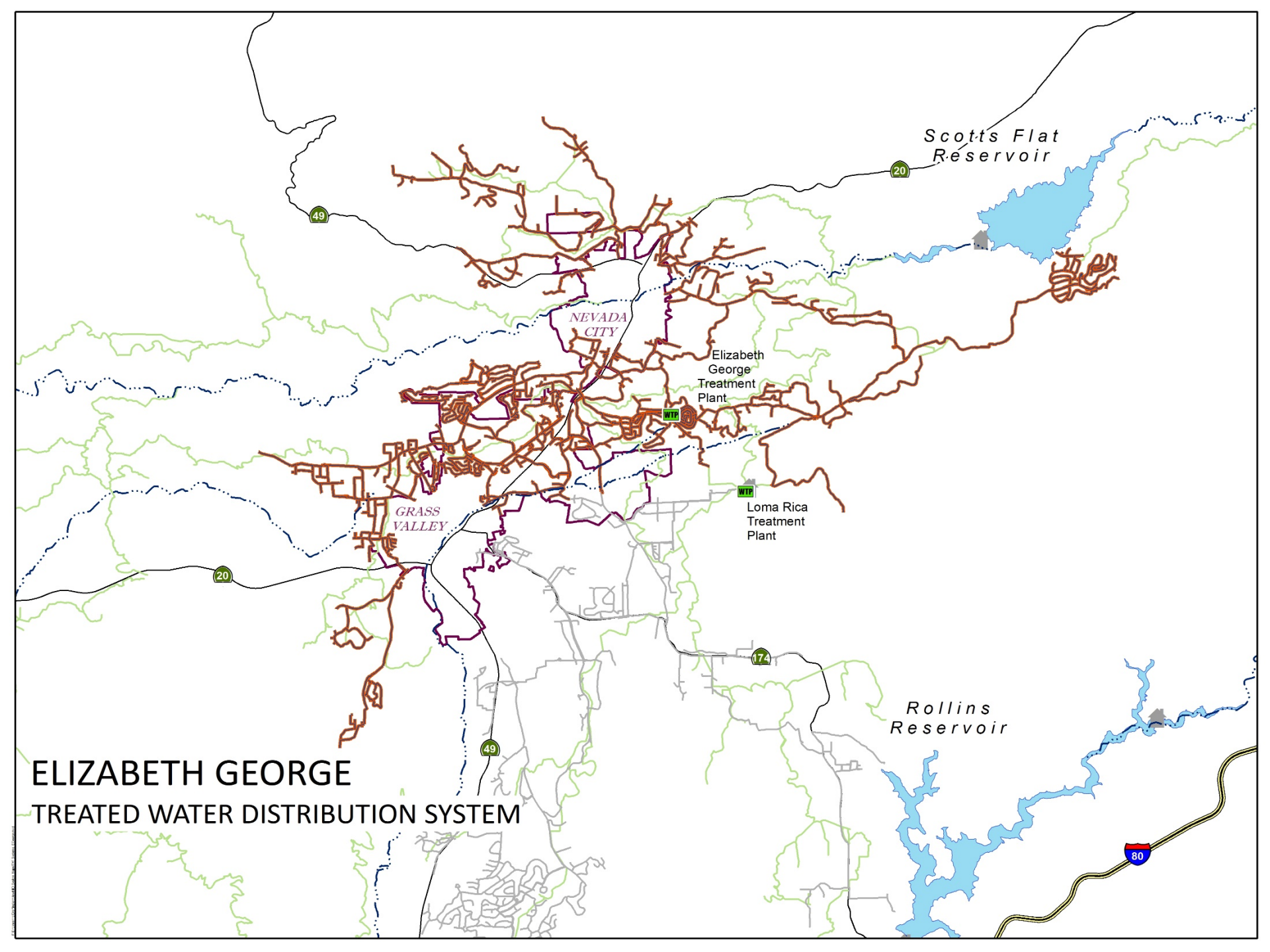
Deer Creek System Cascade Canal Diversion					
		Average Flows 2019		No. of Customers	
Canal	**Length Miles**	**Summer**	**Winter**	**Summer**	**Winter**
Cascade	6.1	31.9	12.2	81	18
Cascade Pipe	12			19	4
Snow Mtn	5.2	2.8		65	13
Willow Valley	0.45			7	4
Cement Hill	3.7	1.1		69	11
Lake Vera Pipe	0.66			14	0
Sugar Loaf Res/Pipe				2	0
Red Hill	2.3	0.8		70	10
Red Hill Res/Pipe				3	1
Buffington	0.136			10	4
Upper G.V.	0.86	0.2		1	1
Chicago Park	8.27	17.6		217	35
Sunshine Valley	1.53	1.4		73	16
Sontag	2.35	0.5		56	17
Ripkin	0.62	0.2		11	0
Russ Reservoir				4	0
Chicago Park East	1.56	1.1		54	8
Chicago Park West	1.84	1.4		53	5
Meyer Bierwagen Pipe	0.49			17	1
Smith Moulton	0.83			21	2
Blum Pipe	0.33			5	0
John Henry Meyer	1.52	0.2		24	5
Rattlesnake	10.25	7.6		173	32
Woodpecker	1.41	0.6		60	19
Forest Springs	3.2	0.9		59	11
Maben	5.77	0.9		75	11
Maben Res/Pipe				20	5
Kyler	1.7			48	6
Grove	3.26	2.4		68	7
Cherry Creek	0.3			15	0
O Leary Pipe				7	0
Total: 31 Canals	**76.636**	**71.6**	**12.2**	**1401**	**246**

Cascade System Drinking Water Treatment Plants

Elizabeth George Water Treatment Plant

- 18 MGD Capacity
- Serves 6,342 Connections
  - Equivalent to population of 18,000 people
- 153 Miles of Pipeline
- >60 Pressure zones
- Intertied with Loma Rica, City of Nevada City, & Grass Valley
- Combined with Cascade Shores in 2013
- Produced 1.269 Billion Gallons in 2020

NID

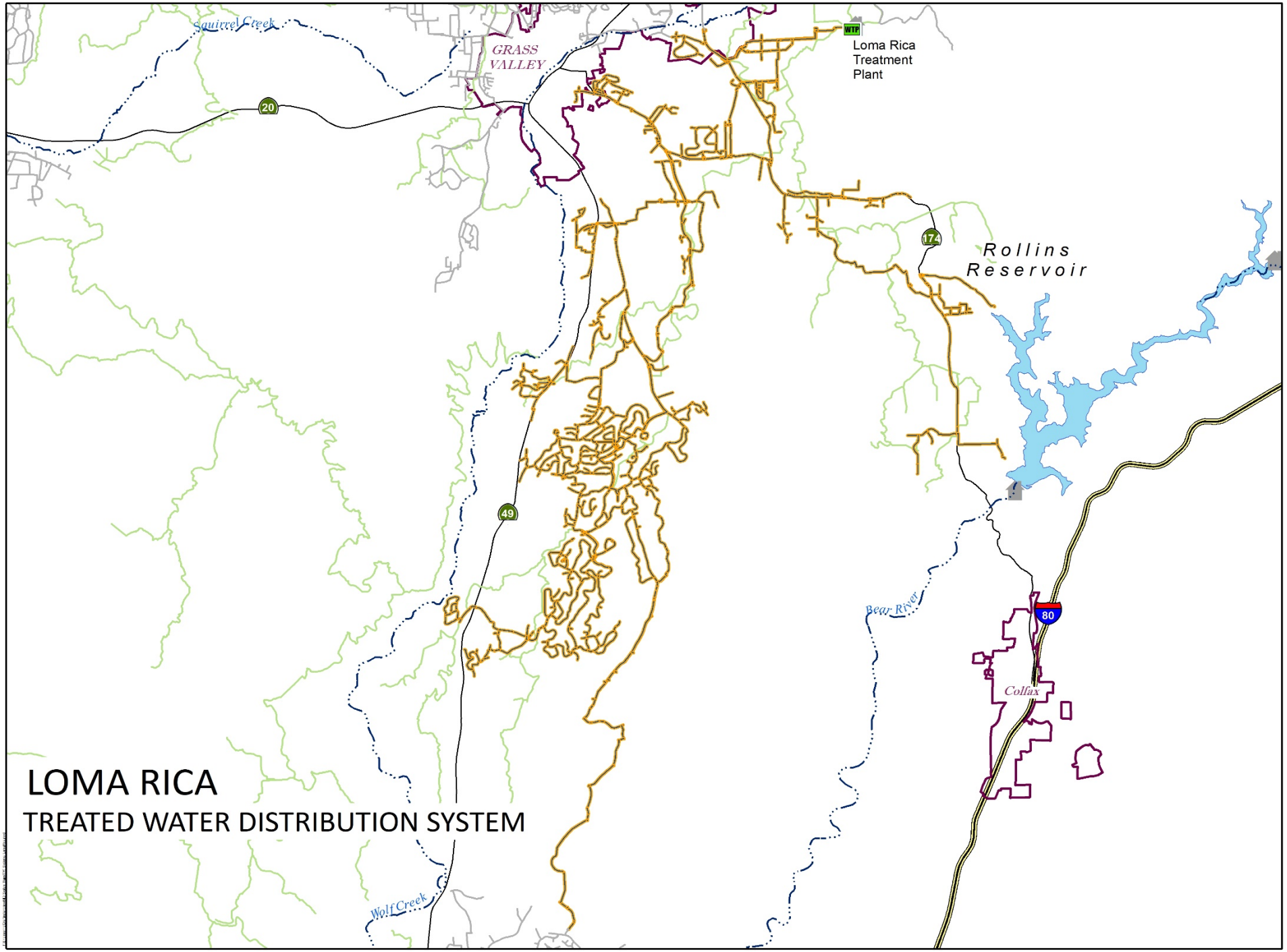


ELIZABETH GEORGE

TREATED WATER DISTRIBUTION SYSTEM

Loma Rica Water Treatment Plant

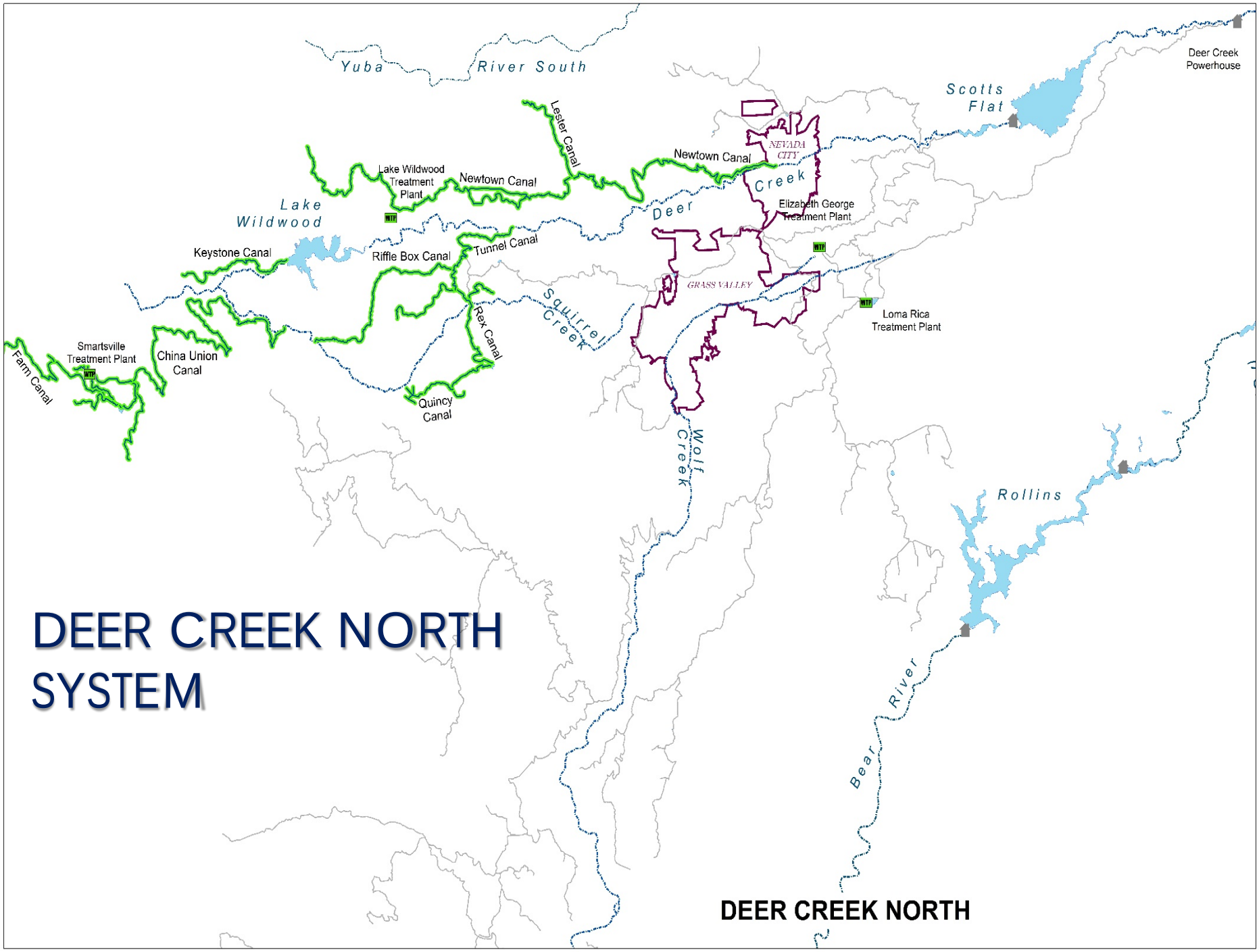
- 8.3 MGD Capacity
- Serves 5,065 Connections
  - Equivalent to population of 14,385 people
- 120 Miles of Pipeline
- >30 Pressure Zones
- Intertied with Lake of the Pines Distribution System
- Produced 660 Million Gallons in 2020


Squirrel Creek
GRASS VALLEY
WTP
Loma Rica Treatment Plant
20
174
Rollins Reservoir
49
Bear River
80
Colfax
Wolf Creek
LOMA RICA
TREATED WATER DISTRIBUTION SYSTEM

City of Nevada City Water Treatment Plant

- 2 MGD Per Day Capacity
- Services 1,252 Connections
  - Equivalent to population of 3,148
- Water Service Provider Within City Limits
- Intertied with NID Elizabeth George System

Deer Creek North System Regulation

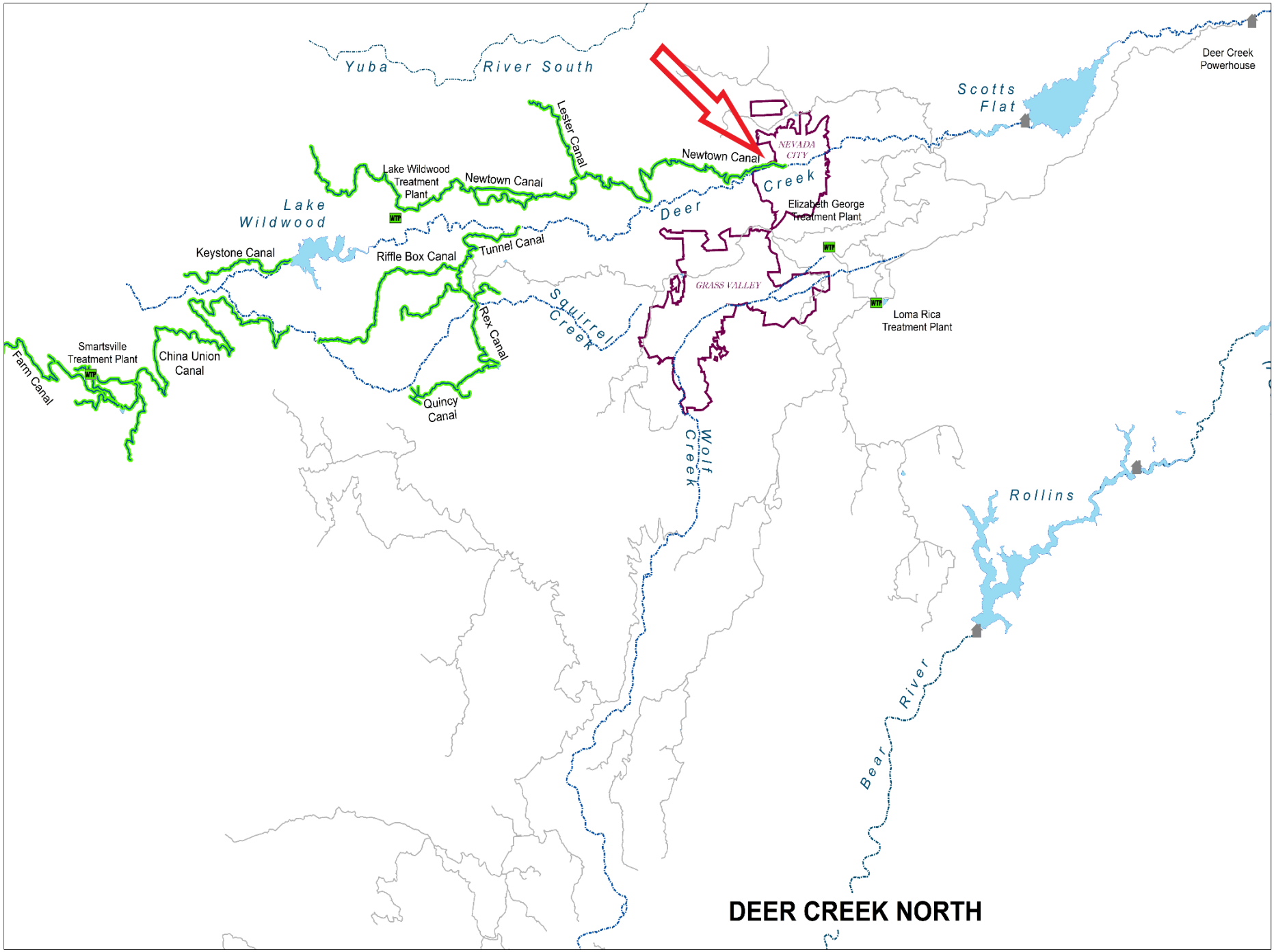


DEER CREEK NORTH SYSTEM

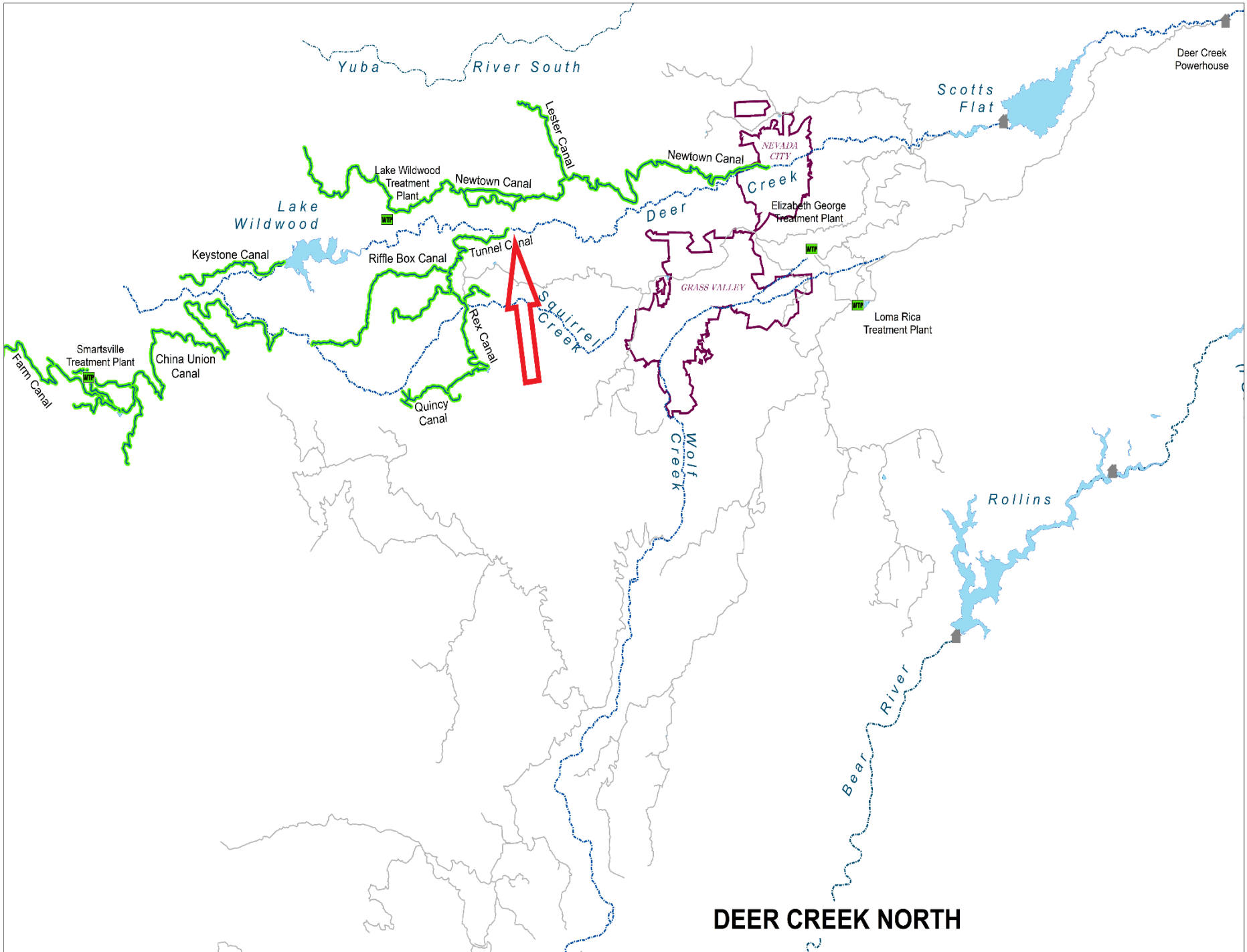
Deer Creek System

- Metering located at Lower Scotts Flat
  - Supplied via natural Deer Creek and SYC flows
  - Flows regulated and distributed into Deer Creek
  - Average flows in 2019 = 31 CFS in summer & 7 CFS in winter
  - Supplies 19 downstream canals covering a distance of > 65 Miles
  - Provides summer irrigation water to 595 customers and 32 winter water customers
  - Is the main source of drinking water supply for Lake Wildwood and Smartsville

Newtown System Diversion

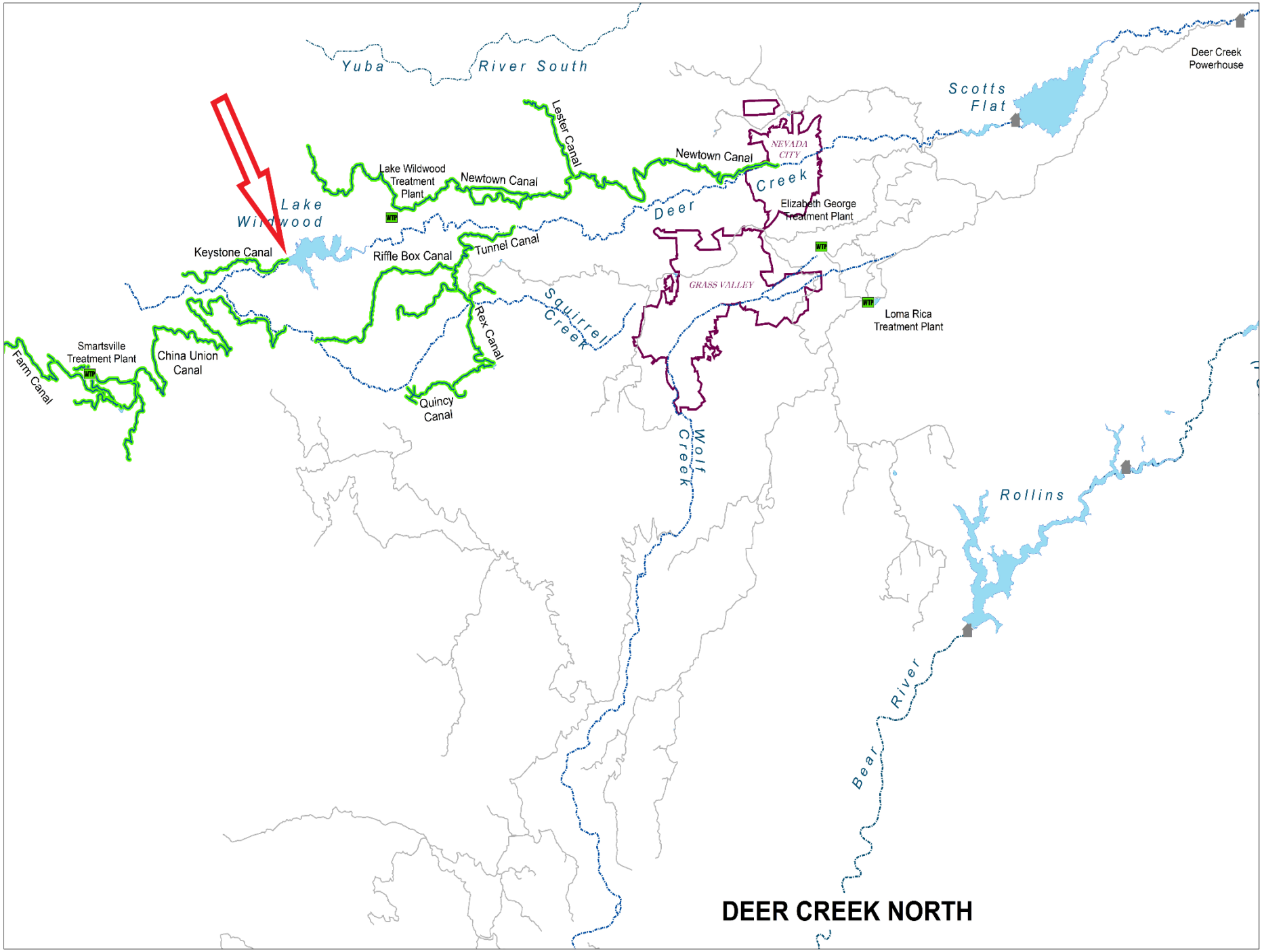

Yuba River South
Lester Canal
Newtown Canal
Lake Wildwood Treatment Plant
Newtown Canal
Lake Wildwood
Deer Creek
NEVADA CITY
Elizabeth George Treatment Plant
Scotts Flat
Deer Creek Powerhouse
Keystone Canal
Riffle Box Canal
Tunnel Canal
GRASS VALLEY
Loma Rica Treatment Plant
Rex Canal
Squirrel Creek
Smartsville Treatment Plant
China Union Canal
Farm Canal
Quincy Canal
Wolf Creek
Rollins
Bear River
DEER CREEK NORTH

Tunnel System Diversion


Yuba River South
Deer Creek Powerhouse
Scotts Flat
Lester Canal
Newtown Canal
NEVADA CITY
Lake Wildwood Treatment Plant
Newtown Canal
Lake Wildwood
Deer Creek
Elizabeth George Treatment Plant
Keystone Canal
Riffle Box Canal
Tunnel Canal
GRASS VALLEY
Loma Rica Treatment Plant
Rex Canal
Squirrel Creek
Smartsville Treatment Plant
China Union Canal
Farm Canal
Quincy Canal
Wolf Creek
Rollins
Bear River
DEER CREEK NORTH

Tunnel System Diversion Measuring Staion

Keystone System Diversion


Yuba River South
Lake Wildwood
Lake Wildwood Treatment Plant
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Newtown Canal
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Squirrel Creek
Deer Creek
NEVADA CITY
Elizabeth George Treatment Plant
GRASS VALLEY
Loma Rica Treatment Plant
Wolf Creek
Scotts Flat
Deer Creek Powerhouse
Rollins
Bear River
DEER CREEK NORTH

Deer Creek System Diversions

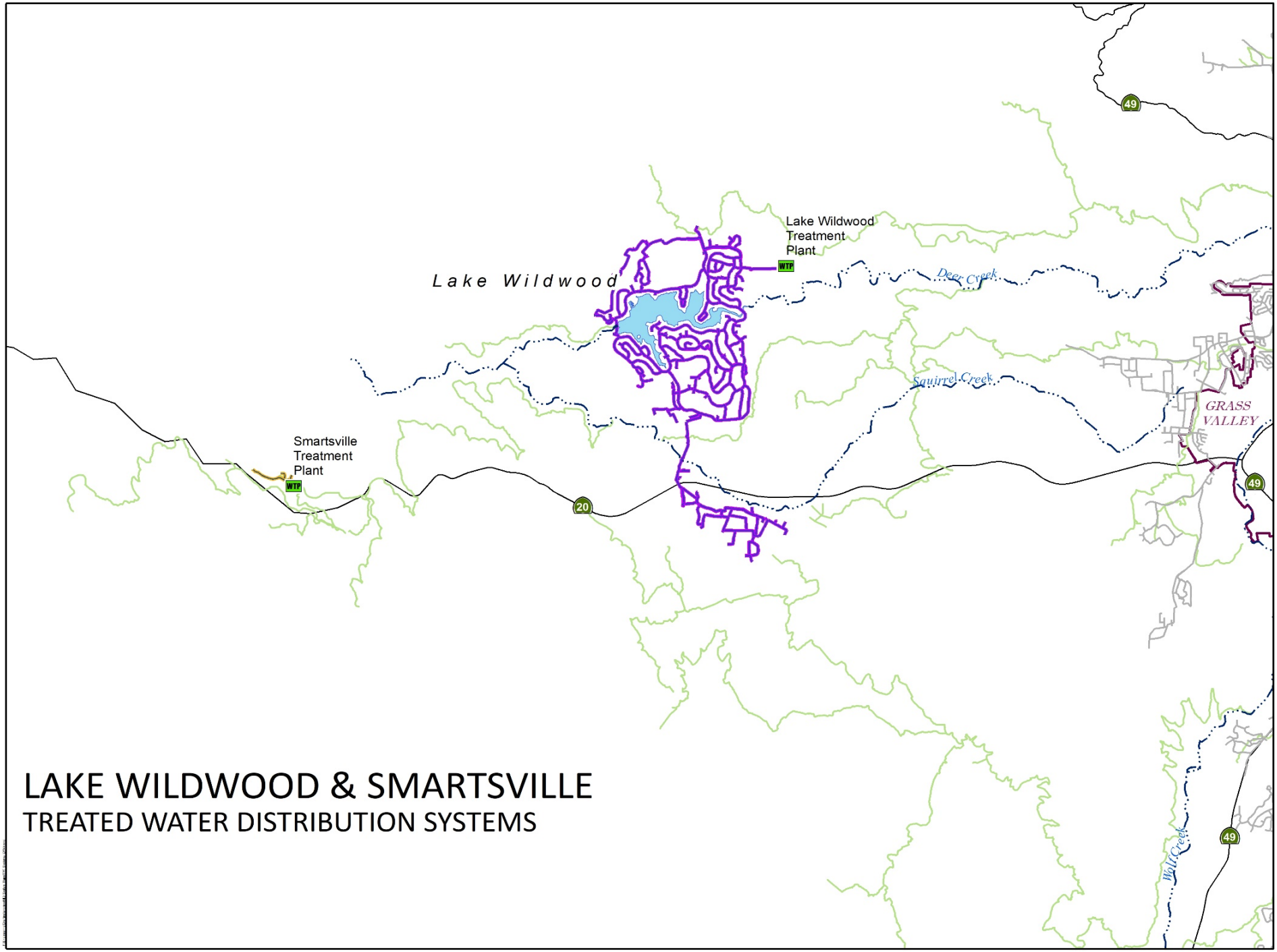
Deer Creek System Newtown, Tunnel, Keystone Diversions					
		Average Flows 2019		No. of Customers	
Canal	**Length Miles**	**Summer**	**Winter**	**Summer**	**Winter**
Deer Creek Nat.		20.2	2.2	2	0
Newtown Diversion					
Newtown	18	11.8	3.3	169	12
Lester	2.34	1.3		48	3
Tunnel Diversion					
Tunnel	3.45	18.9	3.2	30	0
Riffle Box	4.5	4		69	7
Tunnel Ext.	2.21	1.8		74	2
Rex Canal	4.33			33	0
Portugese	1			10	1
Quincy	0.85	1.6		2	0
Quincy Pipe	0.42			21	0
Squirrel Creek Nat.	0.72			12	0
China Union	11.68	8.5		55	4
Spenceville	2.4	3		20	0
Meade	1.38	1.1		12	0
Ousley Bar	1.59			7	0
Town	1.31			3	0
Farm	6.78	3.1		17	3
Smartsville Irrig.				2	0
Keystone Diversion					
Keystone	3	1.2		9	0
Total: 19 Canals	**65.96**	**76.5**	**8.7**	**595**	**32**

Lake Wildwood WTP

- 4 MGD Per Day Capacity
- Services 3,252 Connections
  - Equivalent to population of 9,236
- 44 Miles of Pipeline
- 10 Pressure Zones
- Also Supplies Penn Valley
- Produced 435 Million Gallons in 2020

Smartsville WTP

- 63 GPM Capacity
- Services 43 Connections
  - Equivalent to population of 100
- 1 Mile of Pipeline
- Produced 7.1 Million Gallons in 2020

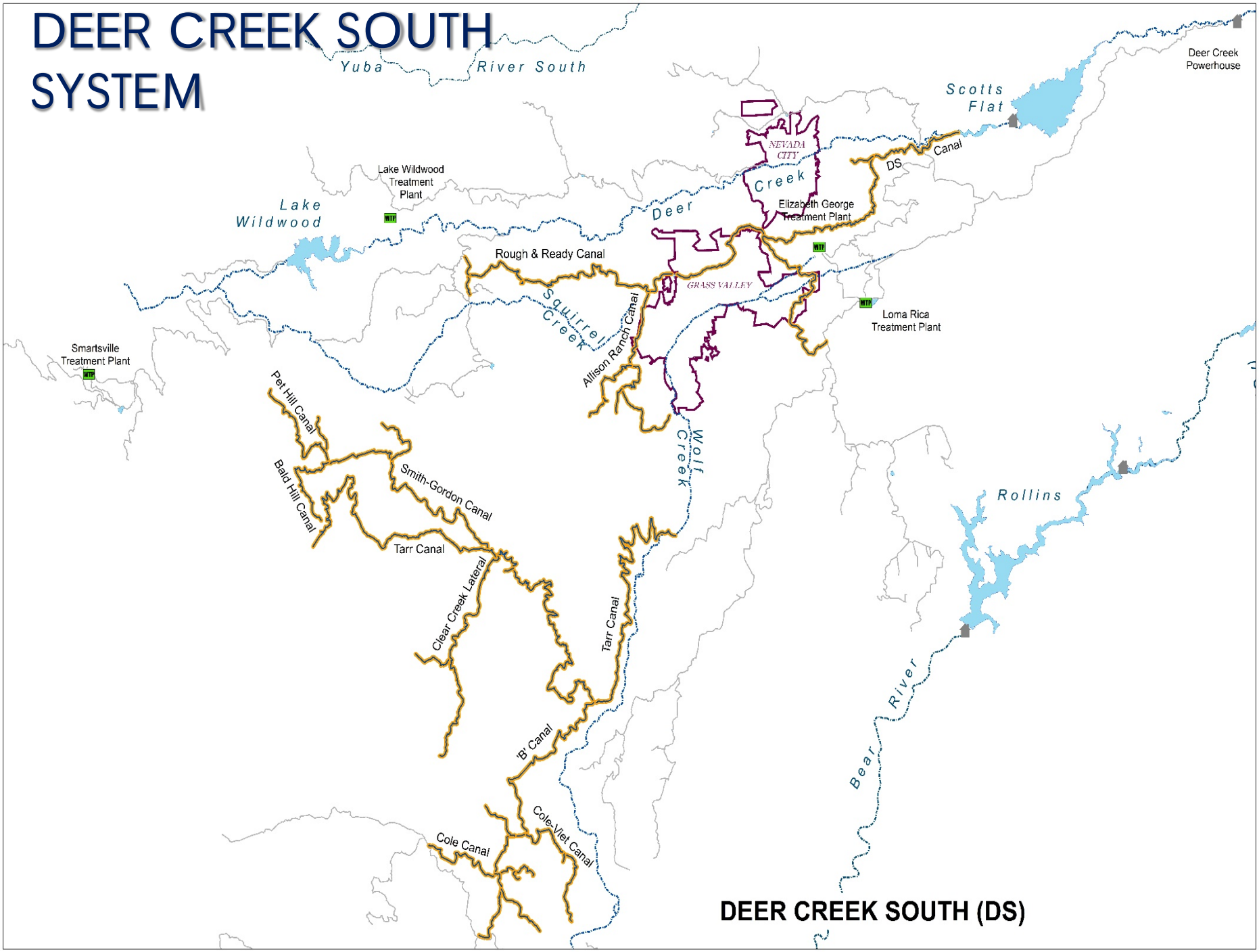


LAKE WILDWOOD & SMARTSVILLE

TREATED WATER DISTRIBUTION SYSTEMS

Deer Creek South System Diversion

DEER CREEK SOUTH SYSTEM



Deer Creek South System Diversion

Deer Creek South System Diversion

- Diversion Regulated at Lower Scotts Flat
  - Supplied via natural Deer Creek and imported SYC flows
  - Flows continuously measured and reported via SCADA
  - Average flows in 2019 = 49 CFS in summer &11 CFS in winter
  - Supplies 25 Downstream canals covering a distance of roughly 83 Miles
  - Provides 1,004 summer irrigation water customers and 37 winter water customers
  - Is the main source of drinking water supply for City of Grass Valley

Measuring Station Head of DS

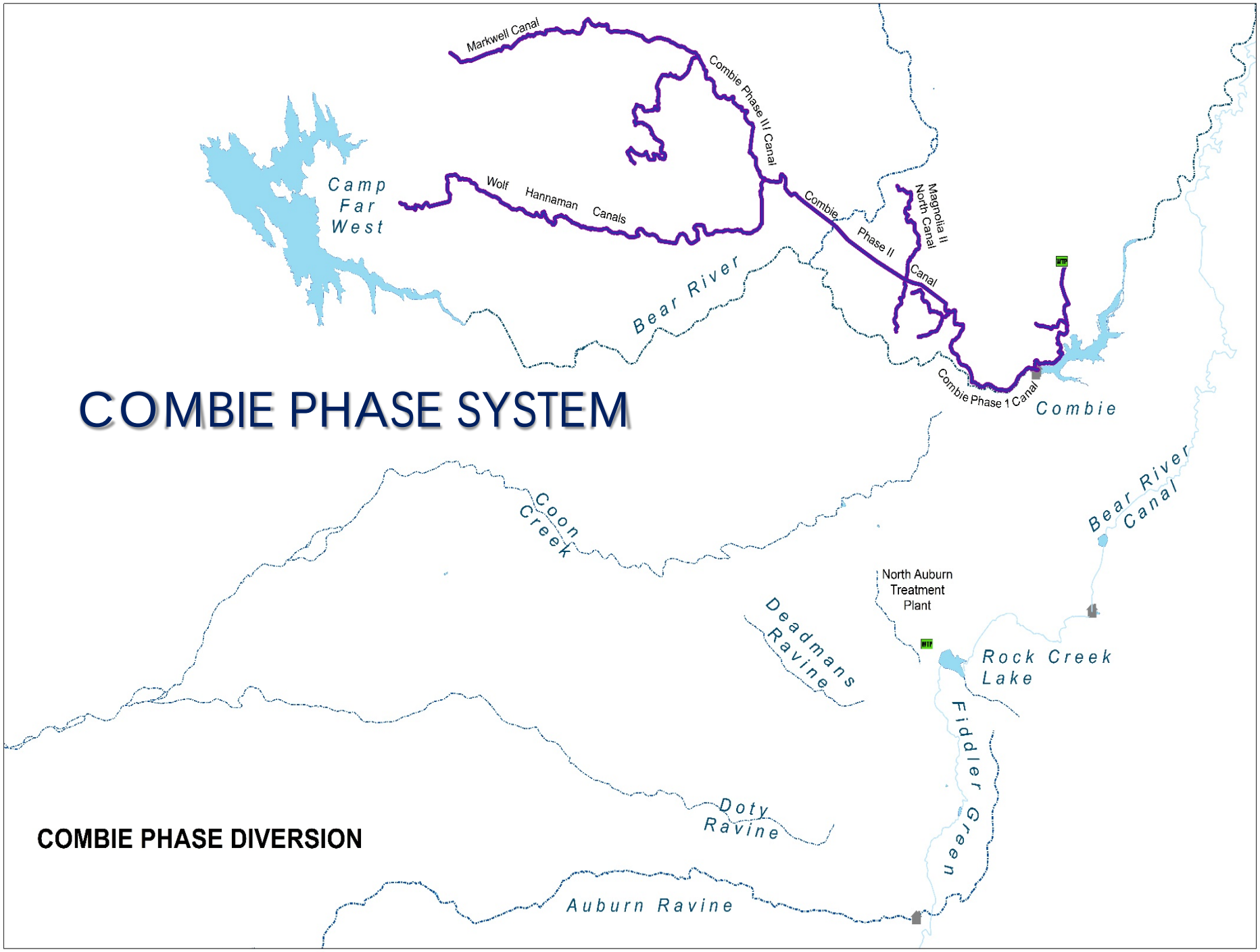
Deer Creek South System Diversion

Deer Creek System					
DS Diversion					
		Average Flows 2019		No. of Customers	
Canal	Length Miles	Summer	Winter	Summer	Winter
D.S.	7.95	48.9	11	43	1
Red Dog	0.55	0.2		13	2
Lower G.V.	2.84	8.3		11	1
Allison Ranch	5.3	4.8		54	4
Corey	1.7	1.3		50	3
Lafayette	0.46			2	0
Rough & Ready	5.3	2.3		115	19
Wolf Creek Nat.				3	0
Tarr	22.3	44.4		148	0
Breckenridge	0.18			2	0
Clear Creek	5.6	6		78	0
Beyers	1.02			13	0
Smith Gordon	6.19	7.9		91	0
Casey Loney	1.41	0.8		14	0
Stinson Pipe				11	0
Pet Hill	2.84	1.8		70	0
Pet Hill Ext.	0.77			26	0
Bald Hill	2.43	2.2		7	0
B Canal	6.02	12.9		64	2
Cole Viet	3.14	2.2		82	3
Miller	1			12	0
Wolf	1.74	3.4		33	0
Pearl Barnes	1.07	0.7		15	0
Carpenter	1.36	1.6		23	1
Cole	2.15	3.1		24	1
Total: 25 Canals	**83.32**	**152.8**	**11**	**1004**	**37**

City of City of Grass Valley Water Treatment Plant

- 5 MGD Per Day Capacity
- Services 2,486 Connections
  - Equivalent to population of > 4,900
- Water Service Provider Within City Limits
- Intertied with NID E. George System

Combie Phase System Diversion


Markwell Canal
Combie Phase III Canal
Camp Far West
Wolf Hannaman Canals
Combie Phase II Canal
Magnolia II North Canal
Bear River
Combie Phase 1 Canal
Combie
COMBIE PHASE SYSTEM
Coon Creek
Bear River Canal
North Auburn Treatment Plant
Deadmans Ravine
Rock Creek Lake
Fiddler Green
Doty Ravine
Auburn Ravine
COMBIE PHASE DIVERSION

Combie Phase System Diversion

- Diversion Located at Lake Combie
  - Supplied via natural Bear River and imported Yuba River flows
  - Flows continuously measured and reported via SCADA
  - Average flows in 2019 = 123 CFS in summer & 35 CFS in winter
    - Also supplies the Combie Ophir System
  - Instream flow requirement of 5 cfs (below Combie in Bear River)
  - Supplies 12 Downstream canals covering a distance of > 33 Miles
  - Provides 400 summer irrigation water customers and 34 winter water customers
  - Is the main source of drinking water supply for Lake of the Pines

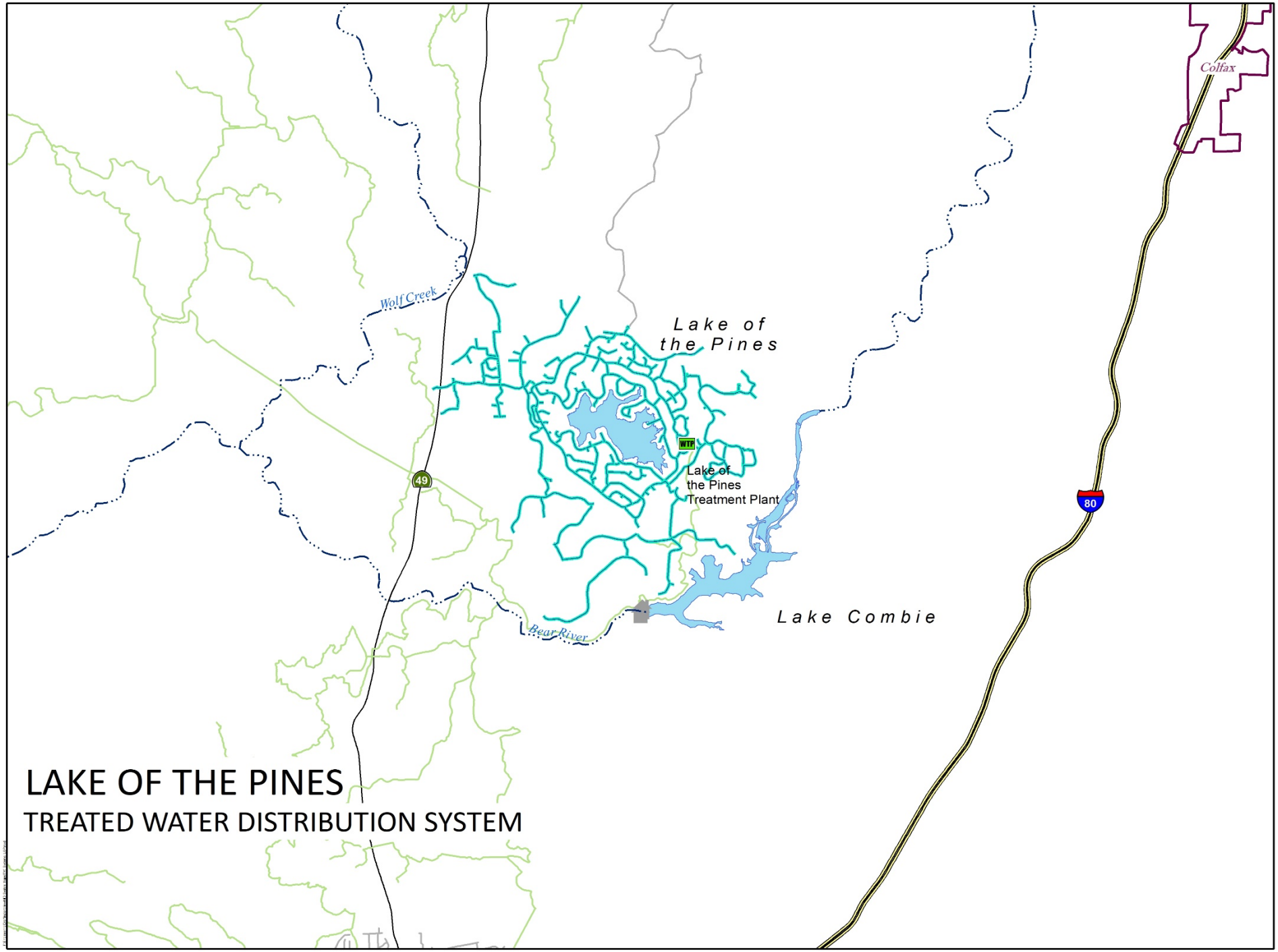
Combie Phase System Diversion

Combie Phase System Diversion

Bear River System					
Combie Phase 1 Diversion					
		Average Flows 2019		No. of Customers	
Canal	Length Miles	Summer	Winter	Summer	Winter
Combie Phase I	1.78	122.2	34.8	0	0
Magnolia III	2.76	6.3		42	11
Magnolia III Ext.	0.63			5	0
Combie Phase II&III	5.46	19		114	14
Combie Phase III	3.44				
Magnolia I	1.02	0.8		22	2
Weeks	0.6	0.4		14	0
Mag. II South	1	1.2		29	1
Mag. II North	2.2	1.1		50	6
Markwell	4.14	6.3		25	0
Wolf Hannaman	5.68	7.2		53	0
Sanford Struckman	4.65	3.7		46	0
Total: 12 Canals	**33.36**	**168.2**	**34.8**	**400**	**34**

Lake of the Pines WTP

- 5 MGD Per Day Capacity
- Services 2,568 Connections
  - Equivalent to population of 7,293
- 42 Miles of Pipeline
- 5 Pressure zones
- Intertied with Loma Rica System
- Produced 401 Million Gallons in 2020



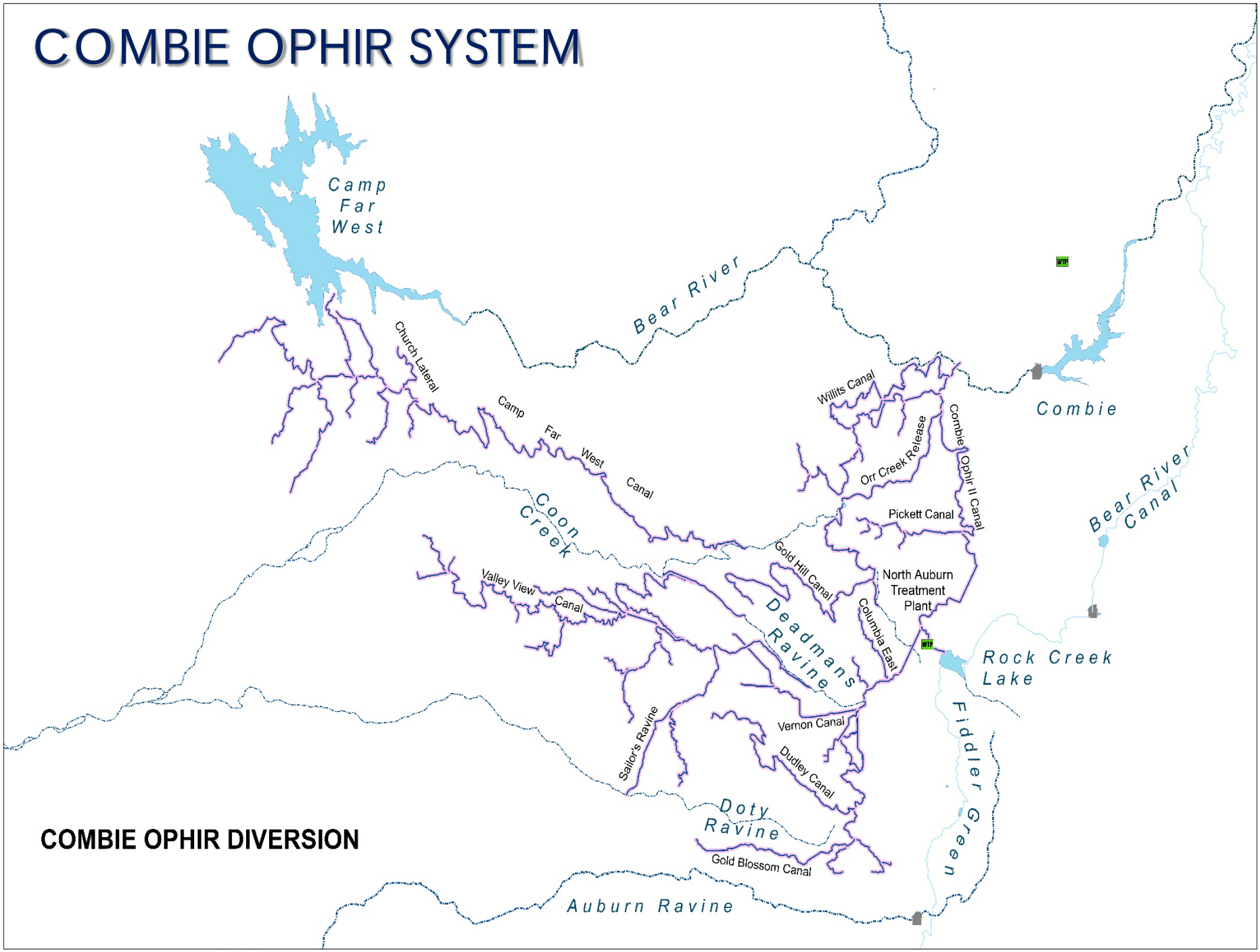
LAKE OF THE PINES

TREATED WATER DISTRIBUTION SYSTEM

Combie Ophir System Diversion

Combie Ophir System Diversion

COMBIE OPHIR SYSTEM



COMBIE OPHIR DIVERSION

Combie Ophir System Diversion

Combie Ophir System Diversion

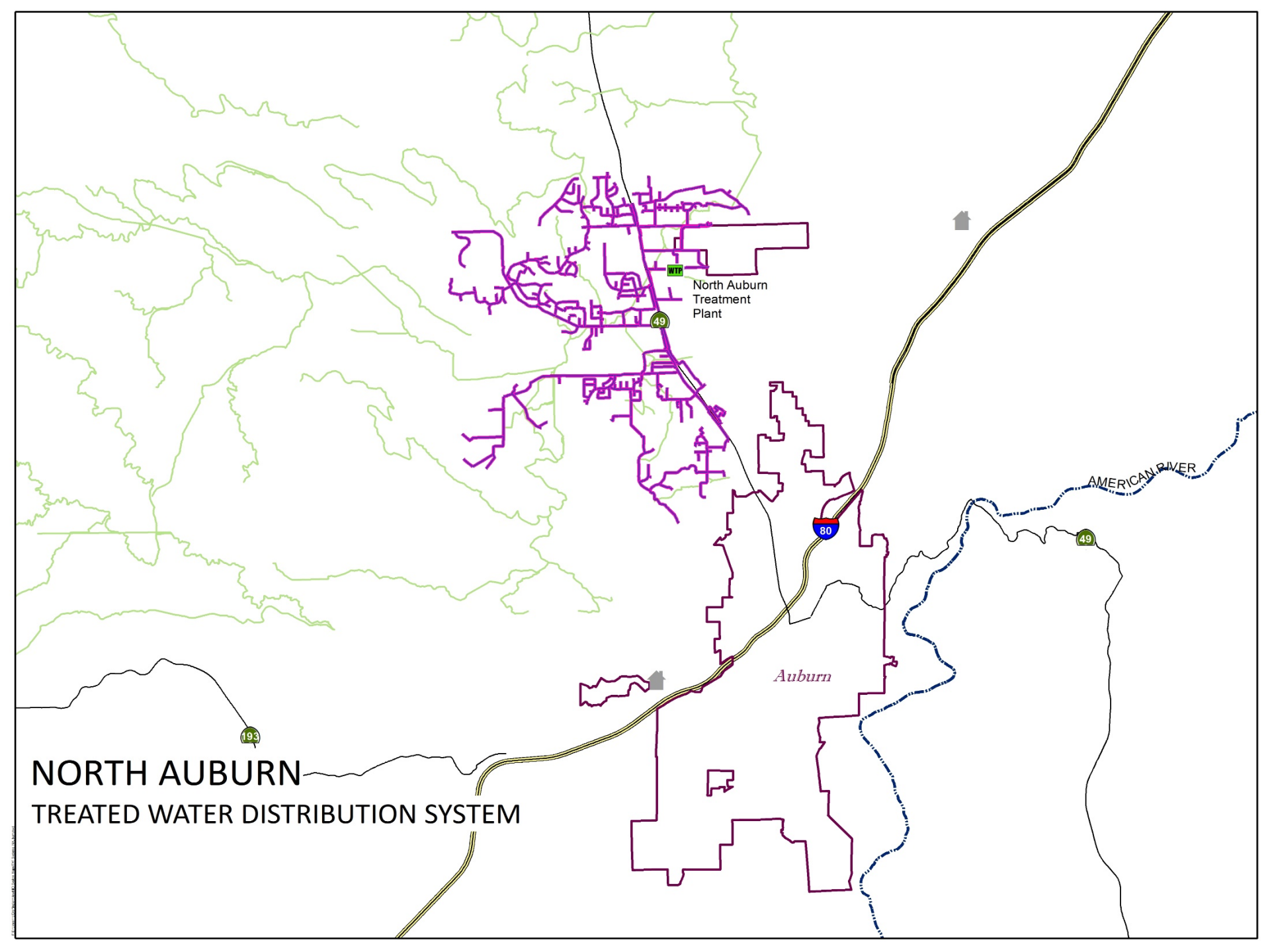
- Diversion From Lake Combie
  - Supplied via natural Bear River and Imported Yuba River flows
  - Flows continuously measured and reported via SCADA
  - Average flows in 2019 = 88 CFS in summer & 29 CFS in winter
  - Supplies 46 downstream canals covering a distance of > 106 Miles
  - Provides 1,991 summer irrigation water customers and 497 winter water customers
  - Is the back up source of drinking water supply to the North Auburn area

Combie Ophir System

Bear River System Combie Ophir 1 Diversion					
		Average Flows 2019		No. of Customers	
Canal	Length Miles	Summer	Winter	Summer	Winter
Combie Ophir I	0.93	88	29	6	2
Lone Star	7.29	5.9		112	21
Rudd	0.37	2		21	2
Rainey	0.24			1	0
Oest	1.34	5.5		40	6
Willets	3			43	9
Orr Creek Nat.		33.7		13	1
Gold Hill I	8.73	7.5		132	17
Camp Far West		31		74	21
Lateral V	0.77	0.6		10	3
Lateral IV	1.4	1.9		31	8
Lateral II	0.82	0.4		5	0
Lateral I	1.51	3.8		30	2
Wiswell Gladding	0.95			17	4
Church	1.18	0.3		7	0
Forbes	1.45			12	8
Renken	1.8	0.9		18	6
Bogdanoff	1.8	2.6		18	2
Camp Far West Ext	13.03			27	0
Combie Ophir II	5.51	42.8		114	16
Picket	1.36	1.9		41	6
Beck	0.3			12	1
Picket North	0.75	0.8		28	3
Picket South	0.18			6	0
Rock Creek Bypass				0	0
Combie Ophir III	1.69			13	3
Columbia East	1.43	0.8		37	9
Columbia West	0.64	0.4		41	5
Combie Ophir IV	3.84	27.3		106	30
Vernon	2.8	4.7		100	40
Rohr-Shanley	1.1			54	17
Herkomer Pipe	0.78			27	8
Dudley	5.27	7.7		176	73
Gold Blossom	3.24	6.8		155	46
St. Patricks	0.92	1		33	13
Little Ophir	1.06			82	32
Hymas	0.24			13	13
Gold Hill II	5.66	3.9		65	5
Dead Mans Ravine		15.3		12	3
Wiskey Diggins	3.1	6.6		4	0
Old Wiskey Diggins	1.07			3	2
Valley View	8.41	9.7		68	20
Kilaga Springs	0.9	1.4		23	4
Nicklas	0.65	1.2		7	2
Livingston	1.32	7.1		64	23
Rielli	2.45	1		22	6
Iron Canyon	1.57	2.4		22	2
Thomas	1.1			21	3
Stringham	1.5	0.8		19	0
Files	0.26	0.9		6	0
Total: 46 Canals	**105.71**	**328.6**	**0**	**1991**	**497**

North Auburn WTP

- Redundant Supply
- 6 MGD Per Day Capacity
- Services 2,506 Connections
  - Equivalent to population of 7,500
- 49 Miles of Pipeline
- 4 Pressure zones
- Intertied with PCWA
- Produced 661 Million Gallons in 2020

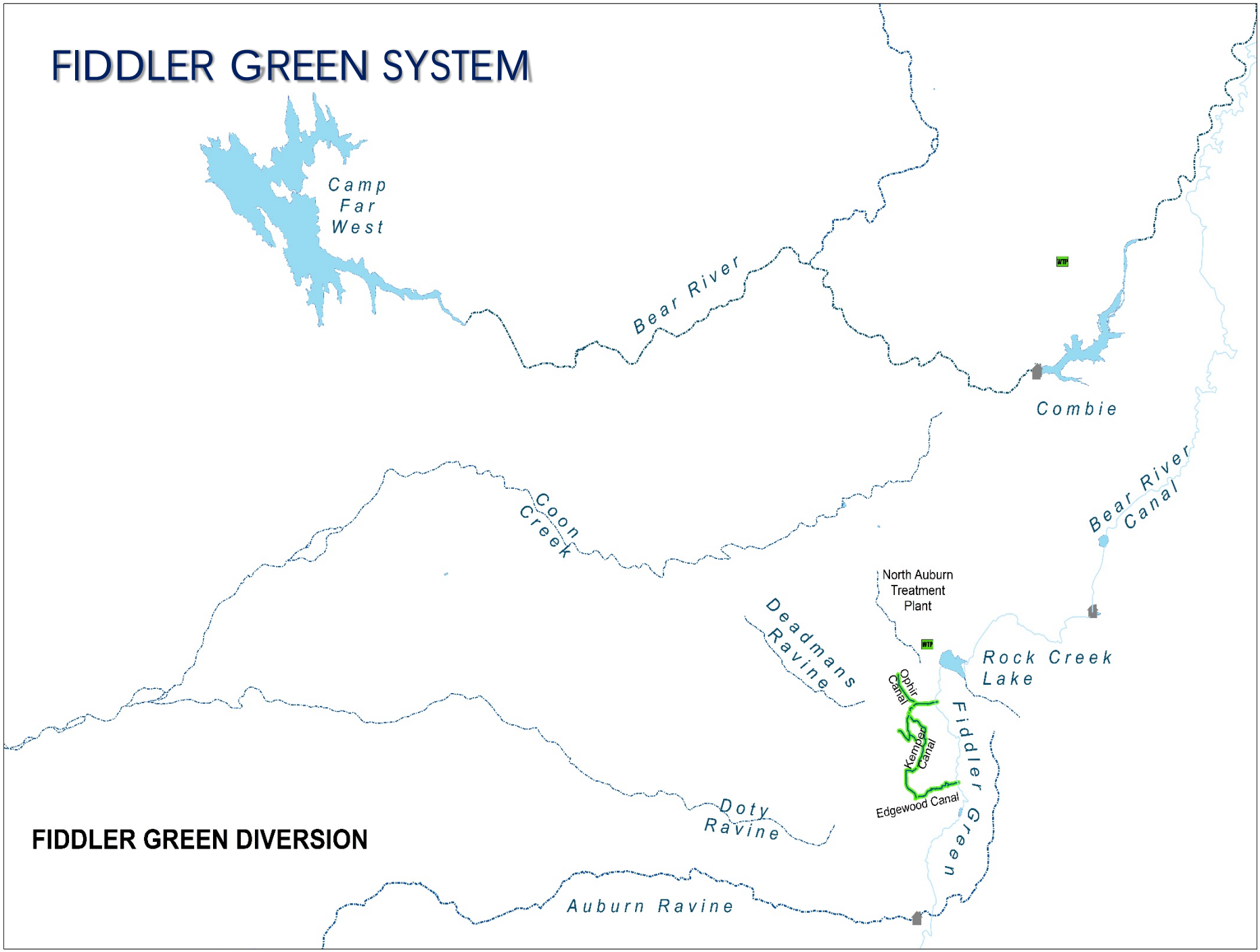


NORTH AUBURN

TREATED WATER DISTRIBUTION SYSTEM

Fiddler Green System Diversion

FIDDLER GREEN SYSTEM



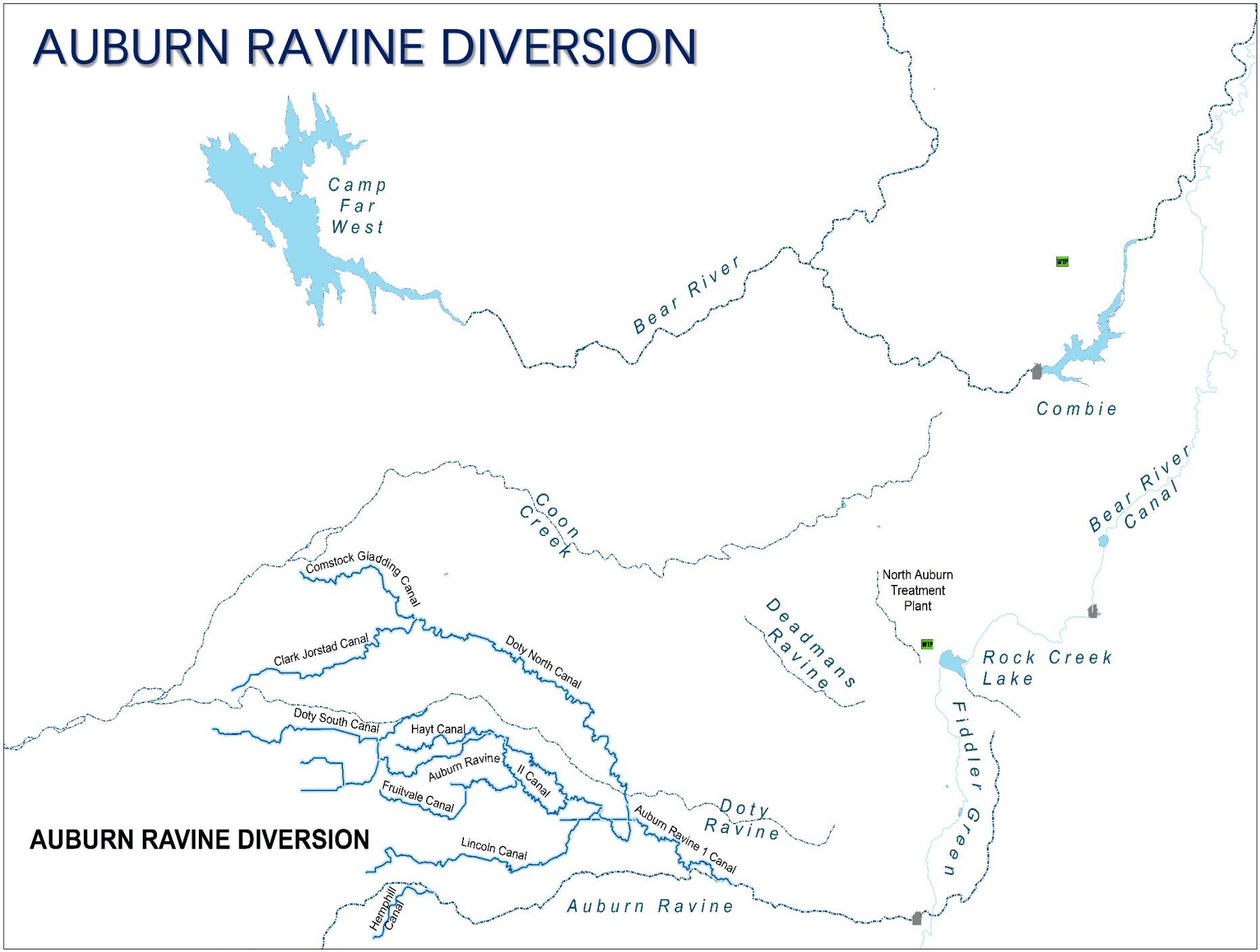
FIDDLER GREEN DIVERSION

Fiddler Green System

Bear River System					
Fiddler Green (Rock Creek)					
		Average Flows 2019		No. of Customers	
Canal	**Length Miles**	**Summer**	**Winter**	**Summer**	**Winter**
Fiddler Green				0	0
Ophir	0.8	7.4		2	0
Kemper	0.18	2.5		1	0
East Kemper	0.72			9	0
West Kemper	0.4			59	12
Bean Cullers	0.67			4	1
Edgewood Canal	0.85	1.1		45	19
Total: 7 Canals	**3.62**	**11**	**0**	**120**	**32**

Auburn Ravine System Diversion

AUBURN RAVINE DIVERSION



Auburn Ravine System Diversions

Auburn Ravine System Diversions

- Diversions Located Approximately 2 Miles West of Ophir and in the City of Lincoln
  - Supplied via natural Bear River and Imported Yuba River flows
  - Flows continuously measured and reported via SCADA
  - Average flows in 2019 = 161 CFS in summer & 3.8 CFS in winter
  - No instream flow requirement
  - Supplies 16 downstream canals covering a distance of 55 Miles
  - Provides 572 summer irrigation water customers and 34 winter water customers

Auburn Ravine System Diversions

Bear River System Auburn Ravine					
		Average Flows 2019		No. of Customers	
Canal	Length Miles	Summer	Winter	Summer	Winter
Auburn Ravine Nat.				30	0
Auburn Ravine I	3.17	47.6	3.8	65	7
Chevallier Pipe	1.17			38	15
Auburn Ravine II	10.01	23.3		77	4
Lincoln	6.5	3.2		75	4
Musser	2.6	10.2		22	1
Markell	1.9	6.4		25	1
Fruitvale	2.17			35	0
Sohier-Ahart	1.26	1.9		3	0
Hayt	2.72	4		37	2
Doty	0.2	21.2		0	0
Doty Natural				8	0
Doty South	4.91	8.7		36	0
Doty North	8.51	16.4		78	0
Comstock Gladding	3.5	4.2		8	0
Clark Jorstad	4.9	9.1		26	0
Hemphill	1.89	4.3		9	0
Total: 16 Canals	**55.41**	**160.5**	**3.8**	**572**	**34**

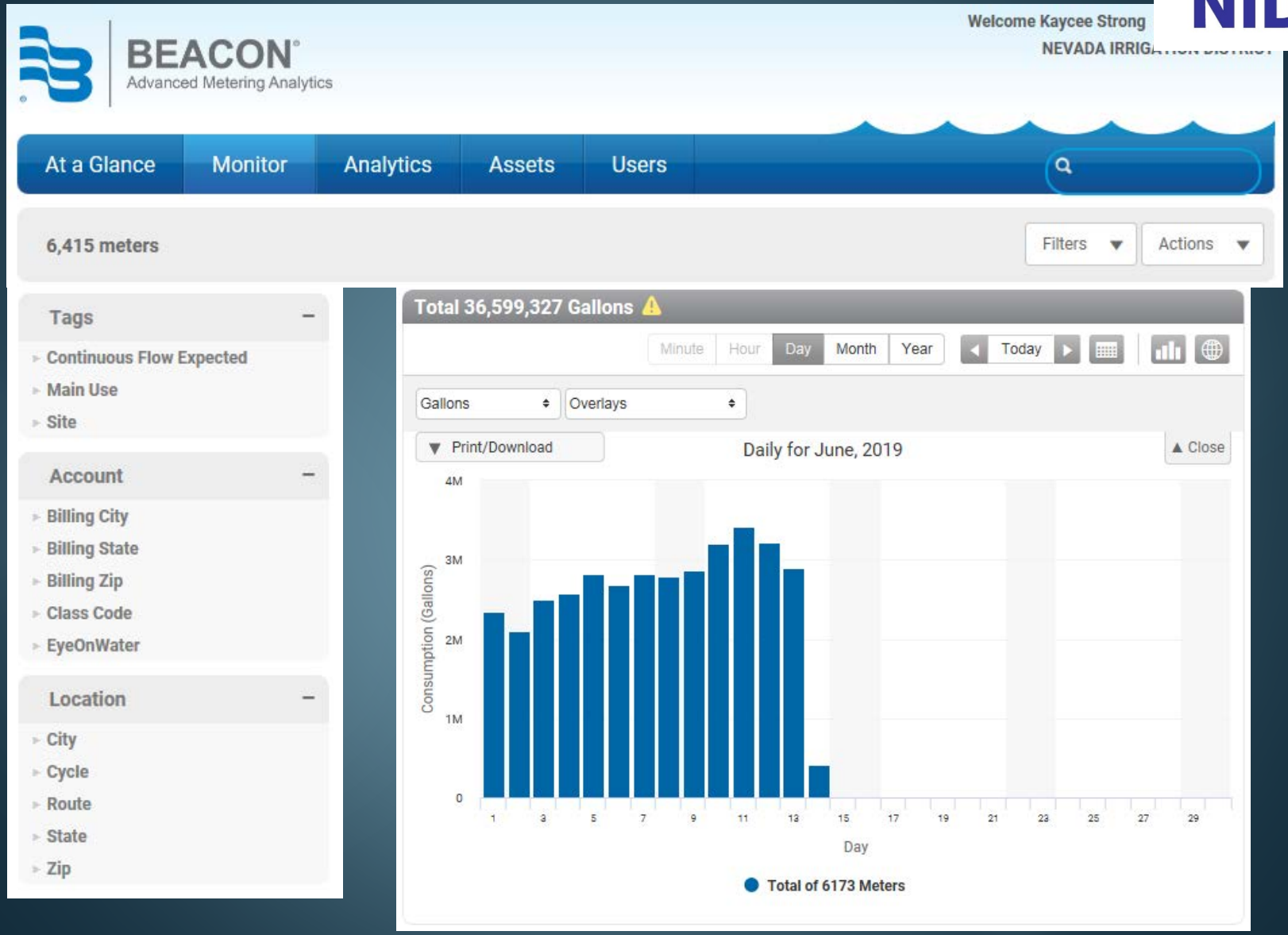
Water Measurement

Treated Water Metering

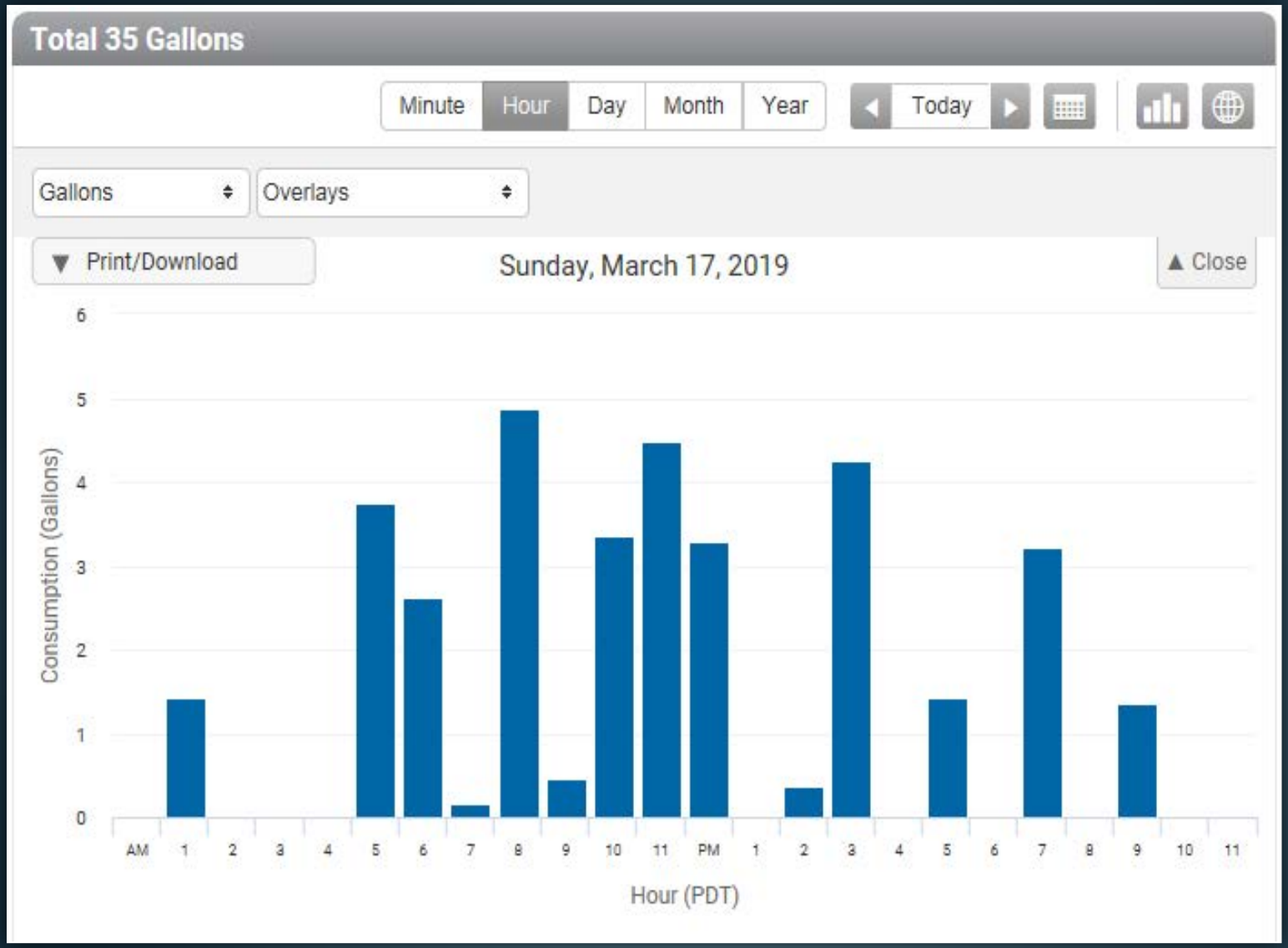
- Switching to Cellular Meter Tech.
- Approximately 11,288 Badger meters installed as of January 2022

- Existing meters are replaced when components fail

NID Monitoring Page



Hour by Hour Water Use



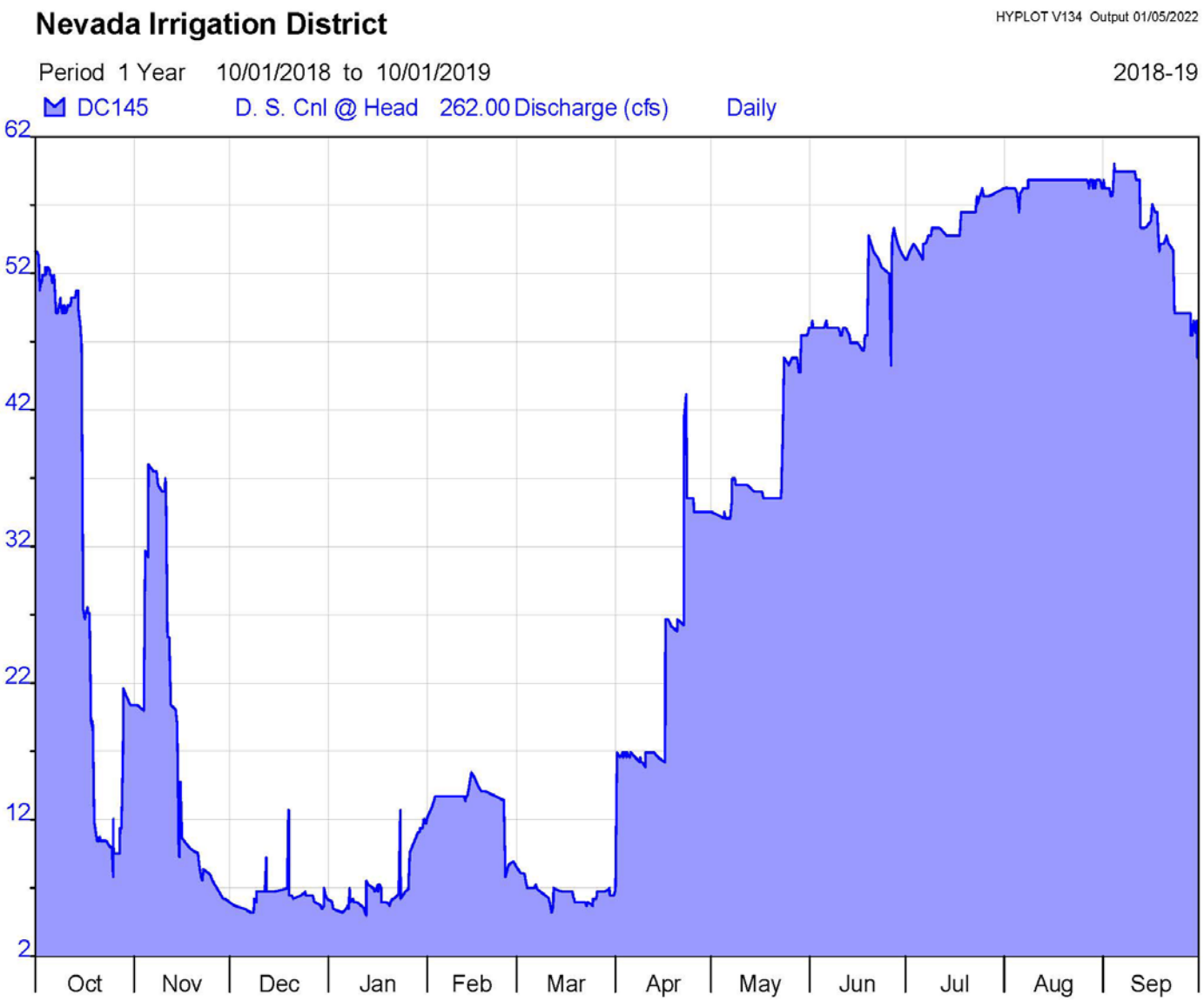
Average = 43 gallons per day

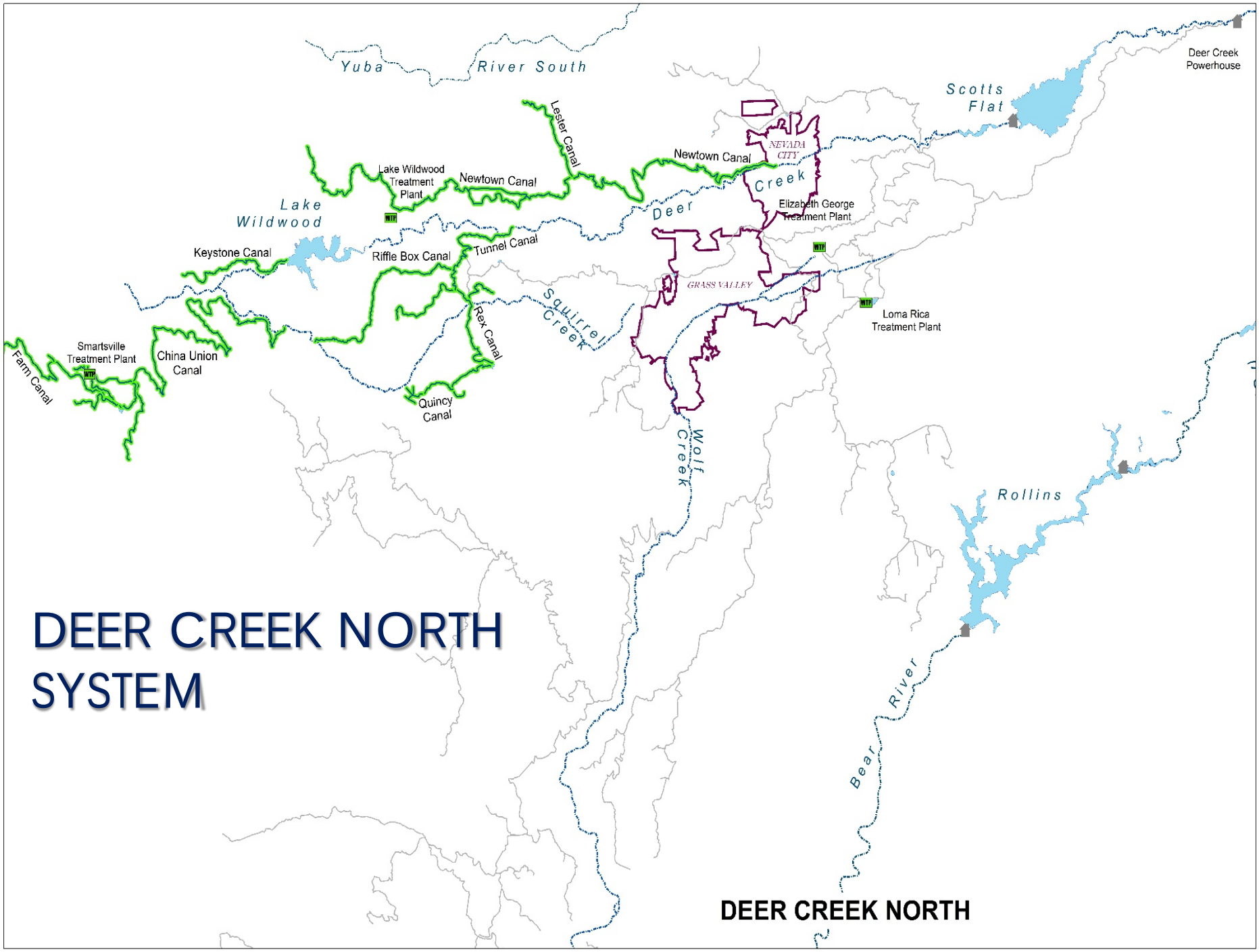
Raw Water Measurement

Raw Water Measurement

Raw Water Measurement

Raw Water Measurement





DEER CREEK NORTH SYSTEM

Raw Water Customer Regulation

- Two types
  - Water Box
  - Piped Manifold
- Each are regulated to an allowable maximum flow based upon purchase allotment

6” Head Pressure Over Orifice

Raw Water Measurement

- Some water box boards have holes on both ends
  - Summer & Winter Service

Raw Water Manifold Service

QUESTIONS?

NID PLAN FOR WATER WORKSHOP #3

WATER SERVICE AREA OVERVIEW