

- Project Facilities**
- Powerhouse
 - Dam
 - Tunnel
 - Penstock
- Transportation**
- Major Road
 - Minor Road
- Hydrography**
- Watercourse
 - Water Body
- Designated Boundary**
- County Boundary
 - Wilderness Area
 - Middle Fork American River Watershed*

*Modified from Calwater Ver. 2.2 to represent drainage above high-water mark of Folsom Lake

PCWA

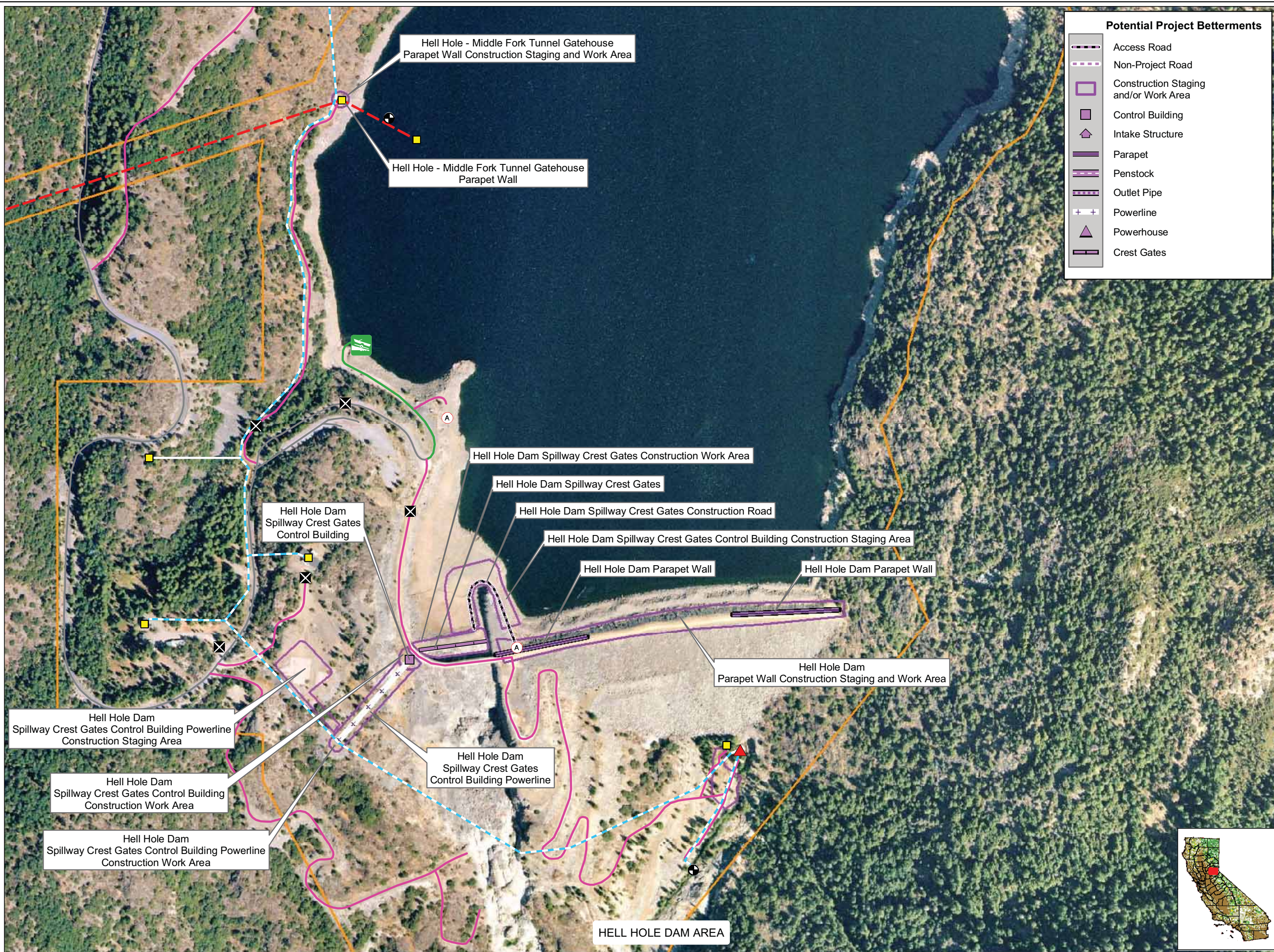
Placer County Water Agency
Middle Fork American River Project

Map 1
Principal Project Facilities and Geographic Setting

0 1 2 3 4 5 Miles

Projection: CA State Plane, Zone 2
Datum: NAD 83

Date: 11/7/07



Potential Project Betterments

- Access Road
- Non-Project Road
- Construction Staging and/or Work Area
- Control Building
- Intake Structure
- Parapet
- Penstock
- Outlet Pipe
- Powerline
- Powerhouse
- Crest Gates

PCWA Facilities and Features

- Dam
- Ancillary and Other Facilities
- Powerhouse
- Gage
- Penstock
- Tunnel
- Gate
- Access Point
- Public Safety Fence
- FERC Boundary

Project Power and Communication Lines:

- Communication
- Power
- Power (underground)
- Communication/Power
- Communication/Power (underground)

Transportation

- Road
- Project Road
- Project Trail
- Recreation Access Road

Project Recreation Facilities

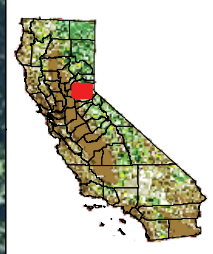
- Picnic Area
- Boat Ramp
- Scenic Viewpoint
- Developed Campground
- Water Supply Line

Other Facilities

PG & E Transmission Lines:

- 230 kV
- 60 kV

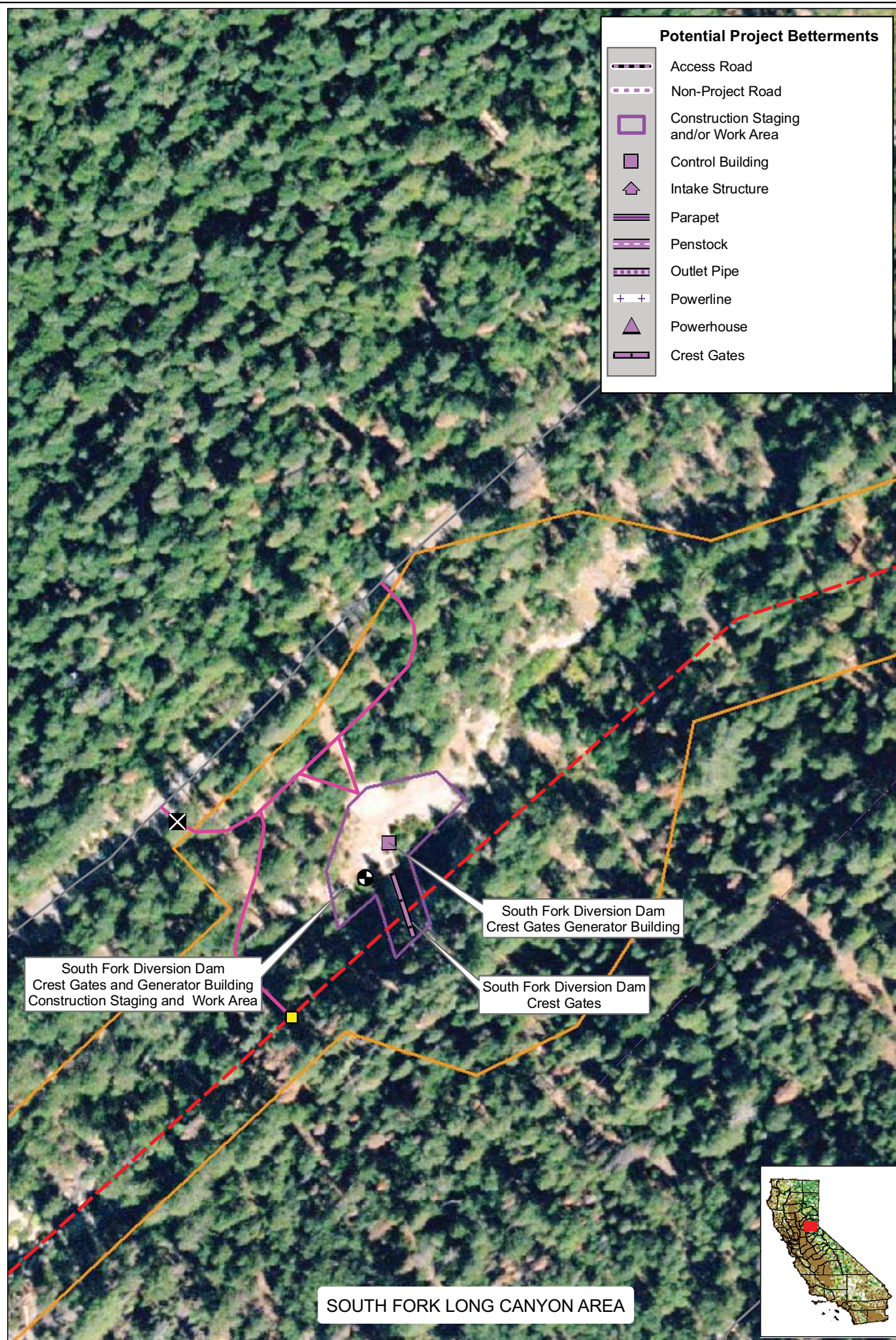
NOTE: Boundary of the potential betterment-related change in reservoir inundation area to be determined



PCWA
Placer County Water Agency
Middle Fork American River Project

Map 2a
Hell Hole Reservoir
Seasonal Storage Increase

0 250 500 Feet
Projection: Ca. Stateplane, Zone 2
Datum: NAD 83
Date: 11/2/07



Potential Project Betterments

- Access Road
- Non-Project Road
- Construction Staging and/or Work Area
- Control Building
- Intake Structure
- Parapet
- Penstock
- Outlet Pipe
- Powerline
- Powerhouse
- Crest Gates

PCWA Facilities and Features

- Dam
- Ancillary and Other Facilities
- Powerhouse
- Gage
- Penstock
- Tunnel
- Gate
- Access Point
- Public Safety Fence
- FERC Boundary

Project Power and Communication Lines:

- Communication
- Power
- Power (underground)
- Communication/Power
- Communication/Power (underground)

Transportation

- Road
- Project Road
- Project Trail
- Recreation Access Road

Project Recreation Facilities

- Picnic Area
- Boat Ramp
- Scenic Viewpoint
- Developed Campground
- Water Supply Line

Other Facilities

PG & E Transmission Lines:

- 230 kV
- 60 kV

NOTE: Boundary of the potential betterment-related change in reservoir inundation area to be determined



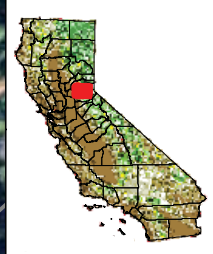
Placer County Water Agency
 Middle Fork American River Project

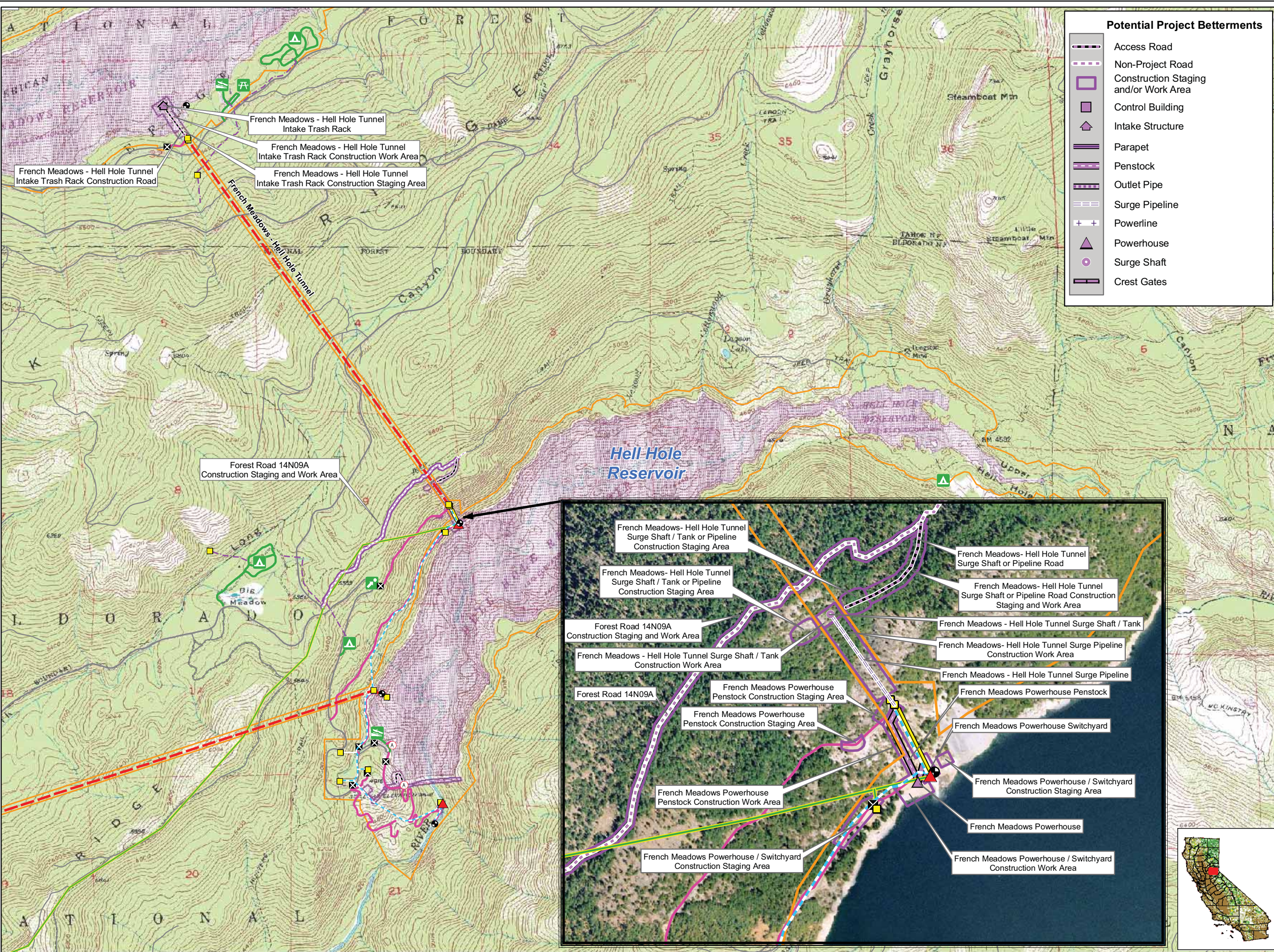
**Map 2b
 Hell Hole Reservoir
 Seasonal Storage Increase**

0 50 100 Feet

Projection: Ca. Stateplane, Zone 2
 Datum: NAD 83

Date: 11/2/07





Potential Project Betterments

- Access Road
- Non-Project Road
- Construction Staging and/or Work Area
- Control Building
- Intake Structure
- Parapet
- Penstock
- Outlet Pipe
- Surge Pipeline
- Powerline
- Powerhouse
- Surge Shaft
- Crest Gates

PCWA Facilities and Features

- Dam
- Ancillary and Other Facilities
- Powerhouse
- Gage
- Penstock
- Tunnel
- Gate
- Access Point
- Public Safety Fence
- FERC Boundary

Project Power and Communication Lines:

- Communication
- Power
- Power (underground)
- Communication/Power
- Communication/Power (underground)

Transportation

- Road
- Project Road
- Project Trail
- Recreation Access Road


Project Recreation Facilities

- Picnic Area
- Boat Ramp
- Scenic Viewpoint
- Developed Campground
- Water Supply Line

Other Facilities

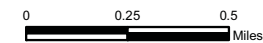
PG & E Transmission Lines:

- 230 kV
- 60 kV



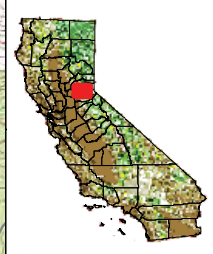
Placer County Water Agency
Middle Fork American River Project

Map 2c French Meadows Powerhouse Capacity Upgrade



Projection: Ca. Stateplane, Zone 2
Datum: NAD 83

Date: 11/5/07





Potential Project Betterments

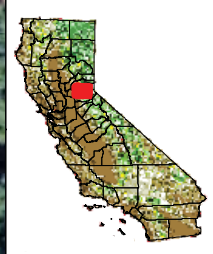

- Access Road
- Non-Project Road
- Construction Staging and/or Work Area
- Control Building
- Intake Structure
- Parapet
- Penstock
- Outlet Pipe
- Powerline
- Powerhouse
- Crest Gates

PCWA Facilities and Features

- Dam
- Ancillary and Other Facilities
- Powerhouse
- Gage
- Penstock
- Tunnel
- Gate
- Access Point
- Public Safety Fence
- FERC Boundary
- Project Power and Communication Lines:**
- Communication
- Power
- Power (underground)
- Communication/Power
- Communication/Power (underground)
- Transportation**
- Road
- Project Road
- Project Trail
- Recreation Access Road
- Project Recreation Facilities**
- Picnic Area
- Boat Ramp
- Scenic Viewpoint
- Developed Campground
- Water Supply Line
- Other Facilities**
- PG & E Transmission Lines:**
- 230 kV
- 60 kV

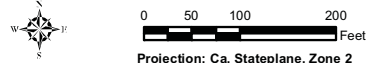
Ralston Powerhouse
Construction Staging Area

Ralston Powerhouse

Placer County Water Agency
Middle Fork American River Project

Map 2d
Ralston Powerhouse Capacity Upgrade



Projection: Ca. Stateplane, Zone 2
Datum: NAD 83

Date: 11/2/07

CONFIDENTIAL

MAP 3

“Known Locations of CRLF in the Middle Fork American River Watershed”

(from BA-BE Appendix D)

Map 3 has been removed from this document because it contains the location(s) of sensitive biological resources and is considered “confidential” information. Confidential biological resources information is located in Volume 4 which may not be made available to the public pursuant to the Federal Energy Regulatory Commission’s (FERC’s) regulations contained in 36 CFR 385.1112. This information is not maintained in FERC’s Public Reference Room or on the Commission’s electronic library except as an indexed item.

Vegetation Communities*

Herb-Dominated Communities

- Annual Grasses / Forbs (HG)
- Wet Meadow (Grass-Sedge-Rush) (HJ)

Non-Vegetated Areas

- Barren (BA)
- Developed/Urban (UB)

Shrub-Dominated Communities

- Huckleberry Oak (CH)
- Lower Montane Mixed Chaparral (CQ)
- Upper Montane Mixed Chaparral (CX)
- Mountain (Thinleaf) Alder (TA)

Tree-Dominated Communities

- Black Oak (QK)
- Blue Oak (QD)
- Canyon Live Oak (QC)
- Cottonwood - Alder (QJ)
- Douglas-Fir - Pine (DP)
- Gray Pine (PD)
- Interior Live Oak (QW)
- Interior Mixed Hardwoods (NX)
- Mixed Conifer - Fir (MF)
- Mixed Conifer - Pine (MP)
- Mixed Riparian Hardwoods (NR)
- Montane Mixed Hardwoods (TX)
- Pacific Douglas-Fir (DF)
- Ponderosa Pine (PP)
- White Alder (QE)
- White Fir (WF)
- Willow (QO)
- Willow - Alder (QY)

*CalVeg Data (2000) with updates from 2007 PCWA field surveys and aerial photo interpretation

Project Facilities

- Powerhouse
- Dam
- Tunnel
- Penstock

Transportation

- Major Road
- Minor Road

Hydrography

- Watercourse
- Water Body
- Middle Fork American River Watershed*

*Modified from Calwater Ver. 2.2 to represent drainage above high-water mark of Folsom Lake

Hypsography

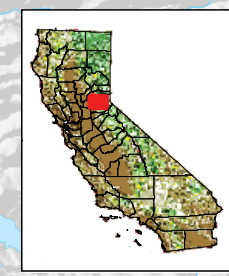
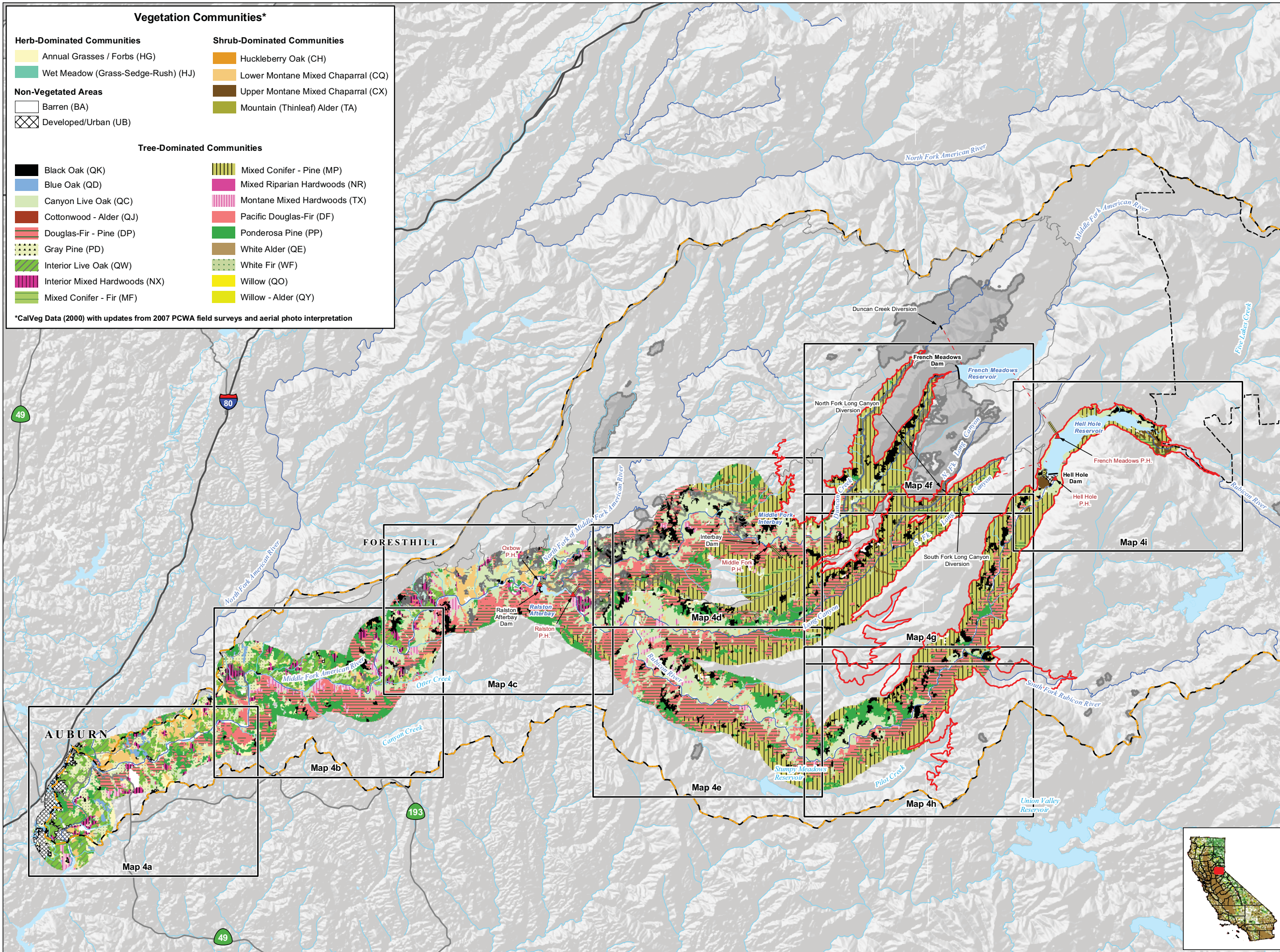
- 5000' Elevation

Designated Boundary

- Wilderness Area

Fire History

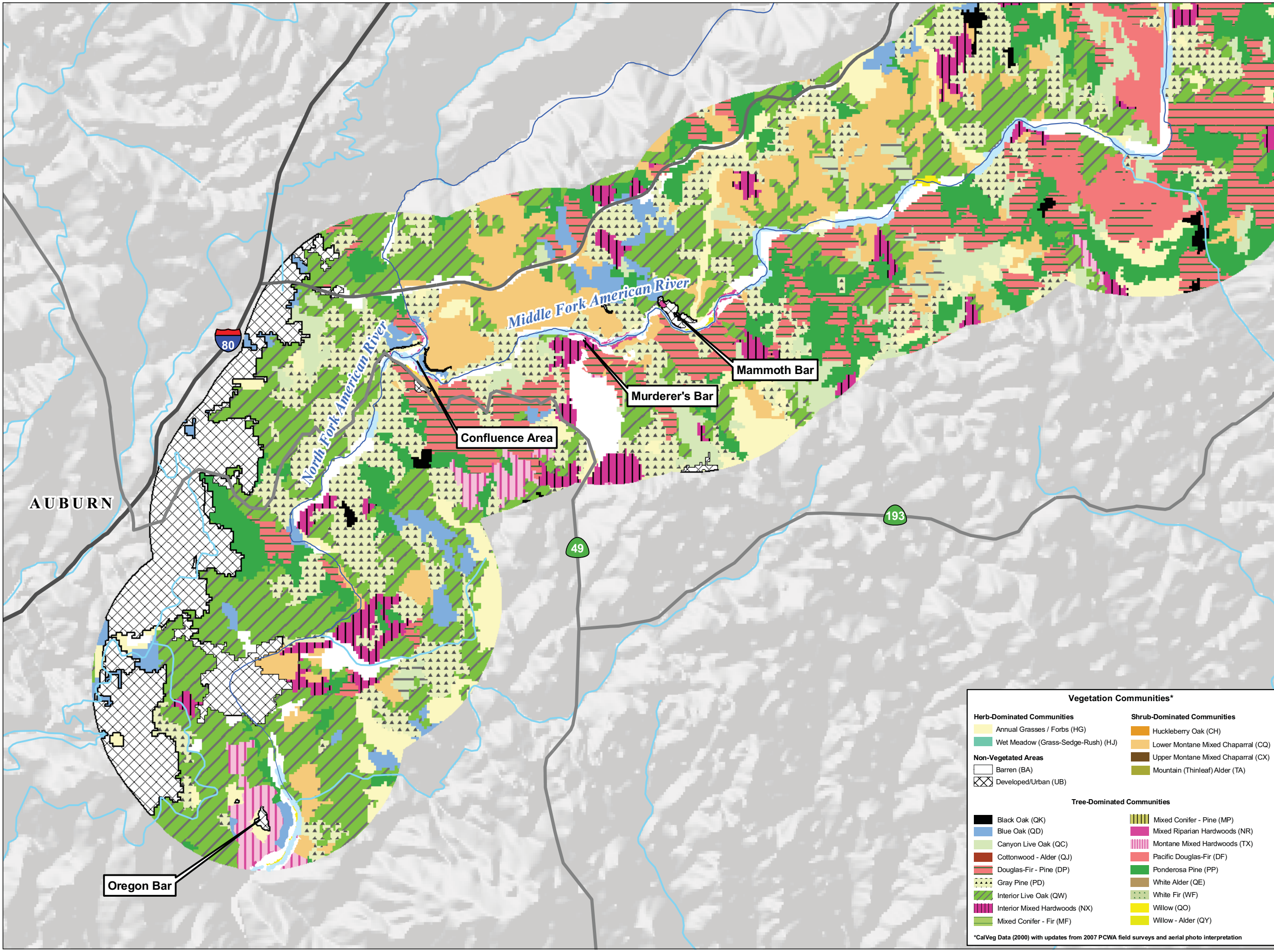
- Areas Burned Since 2000



Placer County Water Agency
Middle Fork American River Project

Map 4 Upland Vegetation Communities in the CRLF Study Area Overview Map

0 0.5 1 2 3 Miles
Projection: CA State Plane, Zone 2
Datum: NAD 83
Date: 2/1/08



- Project Facilities**
- Powerhouse
 - Dam
 - Tunnel
 - Penstock
- Project Recreation Facilities**
- Picnic Area
 - Boat Ramp
 - Scenic Viewpoint
 - Developed Campground
- Transportation**
- Major Road
 - Minor Road
- Hydrography**
- Watercourse
 - Water Body
- Hypsography**
- 5000' Elevation
- Designated Boundary**
- Wilderness Area
- Fire History**
- Areas Burned Since 2000

Vegetation Communities*

Herb-Dominated Communities		Shrub-Dominated Communities	
Annual Grasses / Forbs (HG)	Wet Meadow (Grass-Sedge-Rush) (HJ)	Huckleberry Oak (CH)	Lower Montane Mixed Chaparral (CQ)
Non-Vegetated Areas		Upper Montane Mixed Chaparral (CX)	Mountain (Thinleaf) Alder (TA)
Barren (BA)	Developed/Urban (UB)	Tree-Dominated Communities	
Black Oak (QK)	Blue Oak (QD)	Mixed Conifer - Pine (MP)	Mixed Riparian Hardwoods (NR)
Canyon Live Oak (QC)	Cottonwood - Alder (QJ)	Montane Mixed Hardwoods (TX)	Pacific Douglas-Fir (DF)
Douglas-Fir - Pine (DP)	Gray Pine (PD)	Ponderosa Pine (PP)	White Alder (QE)
Interior Live Oak (QW)	Interior Mixed Hardwoods (NX)	White Fir (WF)	Willow (QO)
Mixed Conifer - Fir (MF)		Willow - Alder (QY)	

PCWA

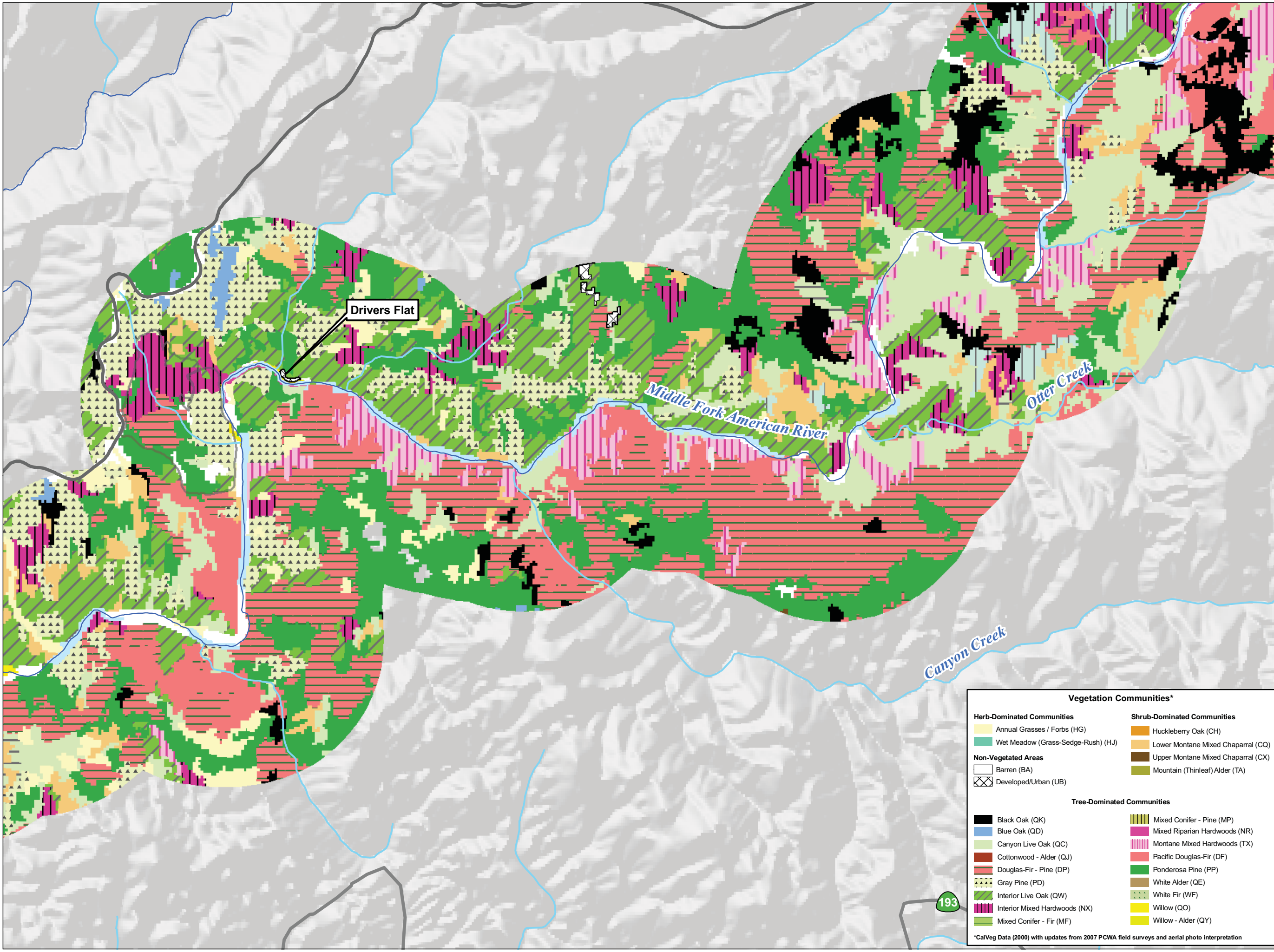
Placer County Water Agency
Middle Fork American River Project

Map 4a
Upland Vegetation Communities within the CRLF Study Area

0 2,000 4,000 Feet

Projection: CA State Plane, Zone 2
Datum: NAD 83

Date: 2/1/08



- Project Facilities**
- Powerhouse
 - Dam
 - Tunnel
 - Penstock
- Project Recreation Facilities**
- Picnic Area
 - Boat Ramp
 - Scenic Viewpoint
 - Developed Campground
- Transportation**
- Major Road
 - Minor Road
- Hydrography**
- Watercourse
 - Water Body
- Hypsography**
- 5000' Elevation
- Designated Boundary**
- Wilderness Area
- Fire History**
- Areas Burned Since 2000

Vegetation Communities*

Herb-Dominated Communities		Shrub-Dominated Communities	
Annual Grasses / Forbs (HG)	Wet Meadow (Grass-Sedge-Rush) (HJ)	Huckleberry Oak (CH)	Lower Montane Mixed Chaparral (CQ)
Non-Vegetated Areas		Upper Montane Mixed Chaparral (CX)	Mountain (Thinleaf) Alder (TA)
Barren (BA)	Developed/Urban (UB)	Tree-Dominated Communities	
Black Oak (QK)	Blue Oak (QD)	Mixed Conifer - Pine (MP)	Mixed Riparian Hardwoods (NR)
Canyon Live Oak (QC)	Cottonwood - Alder (QJ)	Montane Mixed Hardwoods (TX)	Pacific Douglas-Fir (DF)
Douglas-Fir - Pine (DP)	Gray Pine (PD)	Ponderosa Pine (PP)	White Alder (QE)
Interior Live Oak (QW)	Interior Mixed Hardwoods (NX)	White Fir (WF)	Willow (QO)
Mixed Conifer - Fir (MF)		Willow - Alder (QY)	

*CalVeg Data (2000) with updates from 2007 PCWA field surveys and aerial photo interpretation

PCWA

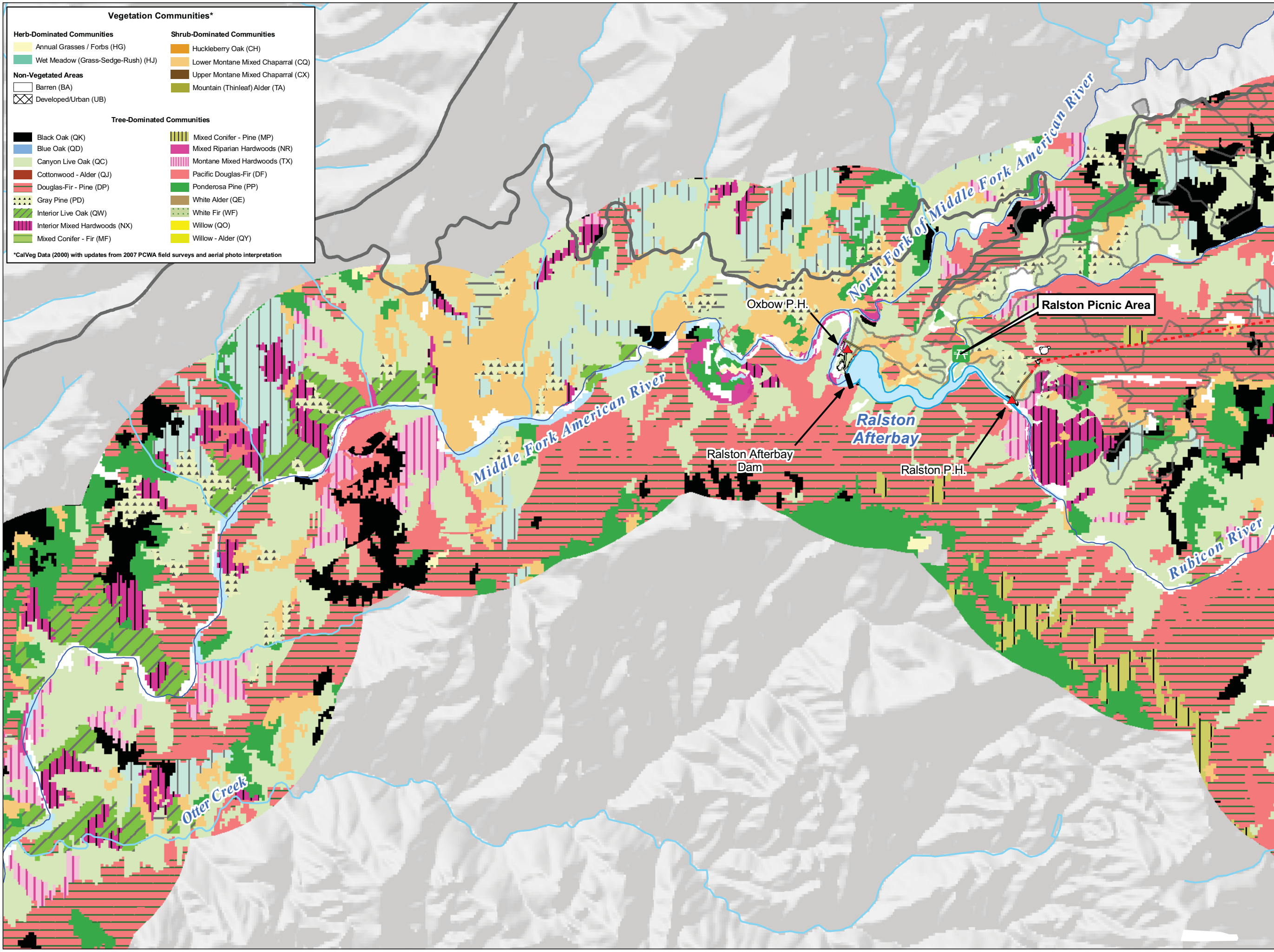
Placer County Water Agency
Middle Fork American River Project

Map 4b
Upland Vegetation Communities
within the CRLF Study Area

0 2,000 4,000 Feet

Projection: CA State Plane, Zone 2
Datum: NAD 83

Date: 2/1/08



Vegetation Communities*

Herb-Dominated Communities		Shrub-Dominated Communities	
Annual Grasses / Forbs (HG)	Wet Meadow (Grass-Sedge-Rush) (HJ)	Huckleberry Oak (CH)	Lower Montane Mixed Chaparral (CQ)
Barren (BA)	Developed/Urban (UB)	Upper Montane Mixed Chaparral (CX)	Mountain (Thinleaf) Alder (TA)
Tree-Dominated Communities			
Black Oak (QK)	Blue Oak (QD)	Canyon Live Oak (QC)	Cottonwood - Alder (QJ)
Douglas-Fir - Pine (DP)	Gray Pine (PD)	Interior Live Oak (QW)	Interior Mixed Hardwoods (NX)
Mixed Conifer - Fir (MF)	Mixed Conifer - Pine (MP)	Mixed Riparian Hardwoods (NR)	Montane Mixed Hardwoods (TX)
Pacific Douglas-Fir (DF)	Ponderosa Pine (PP)	White Alder (QE)	White Fir (WF)
Willow (QO)	Willow - Alder (QY)		

*CalVeg Data (2000) with updates from 2007 PCWA field surveys and aerial photo interpretation

Project Facilities

- ▲ Powerhouse
- Dam
- - - Tunnel
- Penstock

Project Recreation Facilities

- Picnic Area
- Boat Ramp
- Scenic Viewpoint
- Developed Campground

Transportation

- Major Road
- Minor Road

Hydrography

- Watercourse
- Water Body

Hypsography

- 5000' Elevation

Designated Boundary

- Wilderness Area

Fire History

- Areas Burned Since 2000

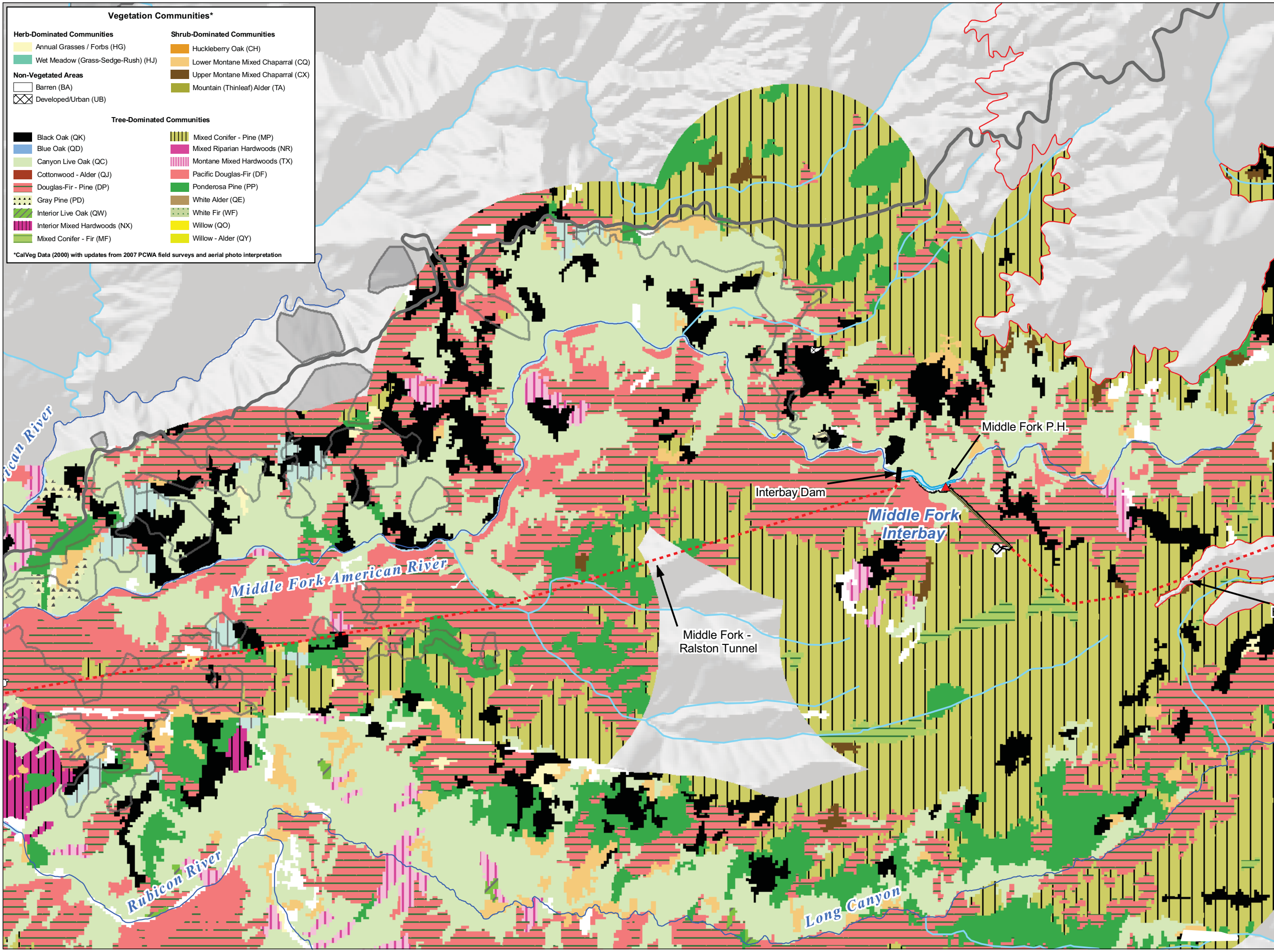
PCWA
Placer County Water Agency
Middle Fork American River Project

Map 4c
Upland Vegetation Communities
within the CRLF Study Area

0 2,000 4,000
Feet

Projection: CA State Plane, Zone 2
Datum: NAD 83

Date: 2/1/08



Vegetation Communities*

Herb-Dominated Communities		Shrub-Dominated Communities	
Annual Grasses / Forbs (HG)	Wet Meadow (Grass-Sedge-Rush) (HJ)	Huckleberry Oak (CH)	Lower Montane Mixed Chaparral (CQ)
Barren (BA)	Developed/Urban (UB)	Upper Montane Mixed Chaparral (CX)	Mountain (Thinleaf) Alder (TA)
Tree-Dominated Communities			
Black Oak (QK)	Blue Oak (QD)	Canyon Live Oak (QC)	Cottonwood - Alder (QJ)
Douglas-Fir - Pine (DP)	Gray Pine (PD)	Interior Live Oak (QW)	Interior Mixed Hardwoods (NX)
Mixed Conifer - Fir (MF)	Mixed Conifer - Pine (MP)	Mixed Riparian Hardwoods (NR)	Montane Mixed Hardwoods (TX)
Pacific Douglas-Fir (DF)	Ponderosa Pine (PP)	White Alder (QE)	White Fir (WF)
Willow (QO)	Willow - Alder (QY)		

Project Facilities

- ▲ Powerhouse
- Dam
- - - Tunnel
- == Penstock

Project Recreation Facilities

- ⛺ Picnic Area
- 🚤 Boat Ramp
- 👁 Scenic Viewpoint
- 🏕 Developed Campground

Transportation

- Major Road
- Minor Road

Hydrography

- Watercourse
- ▭ Water Body

Hypsography

- 5000' Elevation

Designated Boundary

- ▭ Wilderness Area

Fire History

- ▭ Areas Burned Since 2000

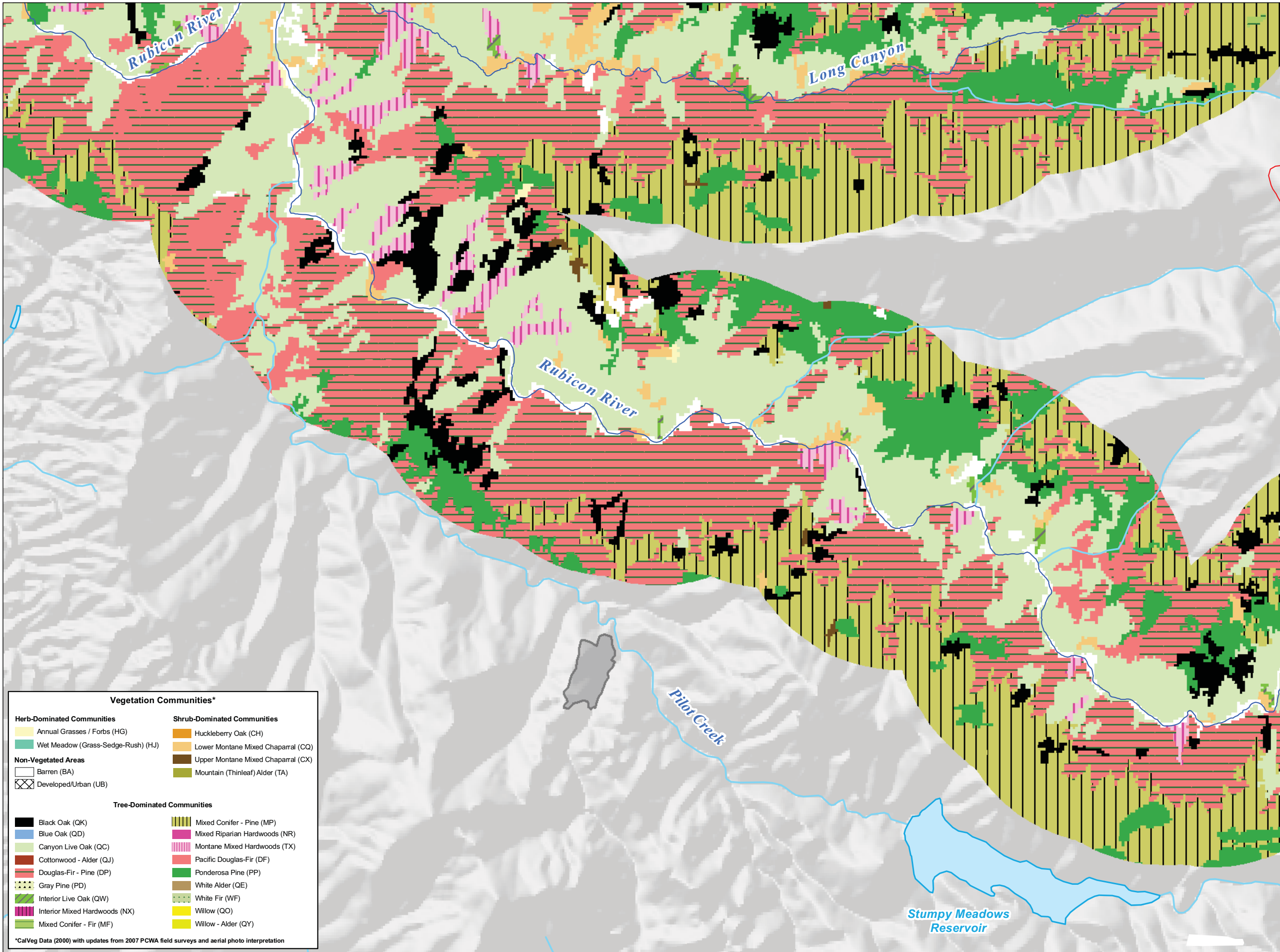
PCWA
Placer County Water Agency
Middle Fork American River Project

Map 4d
Upland Vegetation Communities within the CRLF Study Area

0 2,000 4,000
Feet

Projection: CA State Plane, Zone 2
Datum: NAD 83

Date: 2/1/08



- Project Facilities**
- ▲ Powerhouse
 - Dam
 - - - Tunnel
 - ══ Penstock
- Project Recreation Facilities**
- ⛺ Picnic Area
 - 🚤 Boat Ramp
 - 👁 Scenic Viewpoint
 - 🏕 Developed Campground
- Transportation**
- ══ Major Road
 - Minor Road
- Hydrography**
- Watercourse
 - ▭ Water Body
- Hypsography**
- 5000' Elevation
- Designated Boundary**
- ▭ Wilderness Area
- Fire History**
- ▭ Areas Burned Since 2000

Vegetation Communities*

Herb-Dominated Communities		Shrub-Dominated Communities	
Annual Grasses / Forbs (HG)	Wet Meadow (Grass-Sedge-Rush) (HJ)	Huckleberry Oak (CH)	Lower Montane Mixed Chaparral (CQ)
Barren (BA)	Developed/Urban (UB)	Upper Montane Mixed Chaparral (CX)	Mountain (Thinleaf) Alder (TA)
Tree-Dominated Communities			
Black Oak (QK)	Blue Oak (QD)	Canyon Live Oak (QC)	Cottonwood - Alder (QJ)
Douglas-Fir - Pine (DP)	Gray Pine (PD)	Interior Live Oak (QW)	Interior Mixed Hardwoods (NX)
Mixed Conifer - Fir (MF)	Mixed Conifer - Pine (MP)	Mixed Riparian Hardwoods (NR)	Montane Mixed Hardwoods (TX)
		Pacific Douglas-Fir (DF)	Ponderosa Pine (PP)
		White Alder (QE)	White Fir (WF)
		Willow (QO)	Willow - Alder (QY)

*CalVeg Data (2000) with updates from 2007 PCWA field surveys and aerial photo interpretation

PCWA

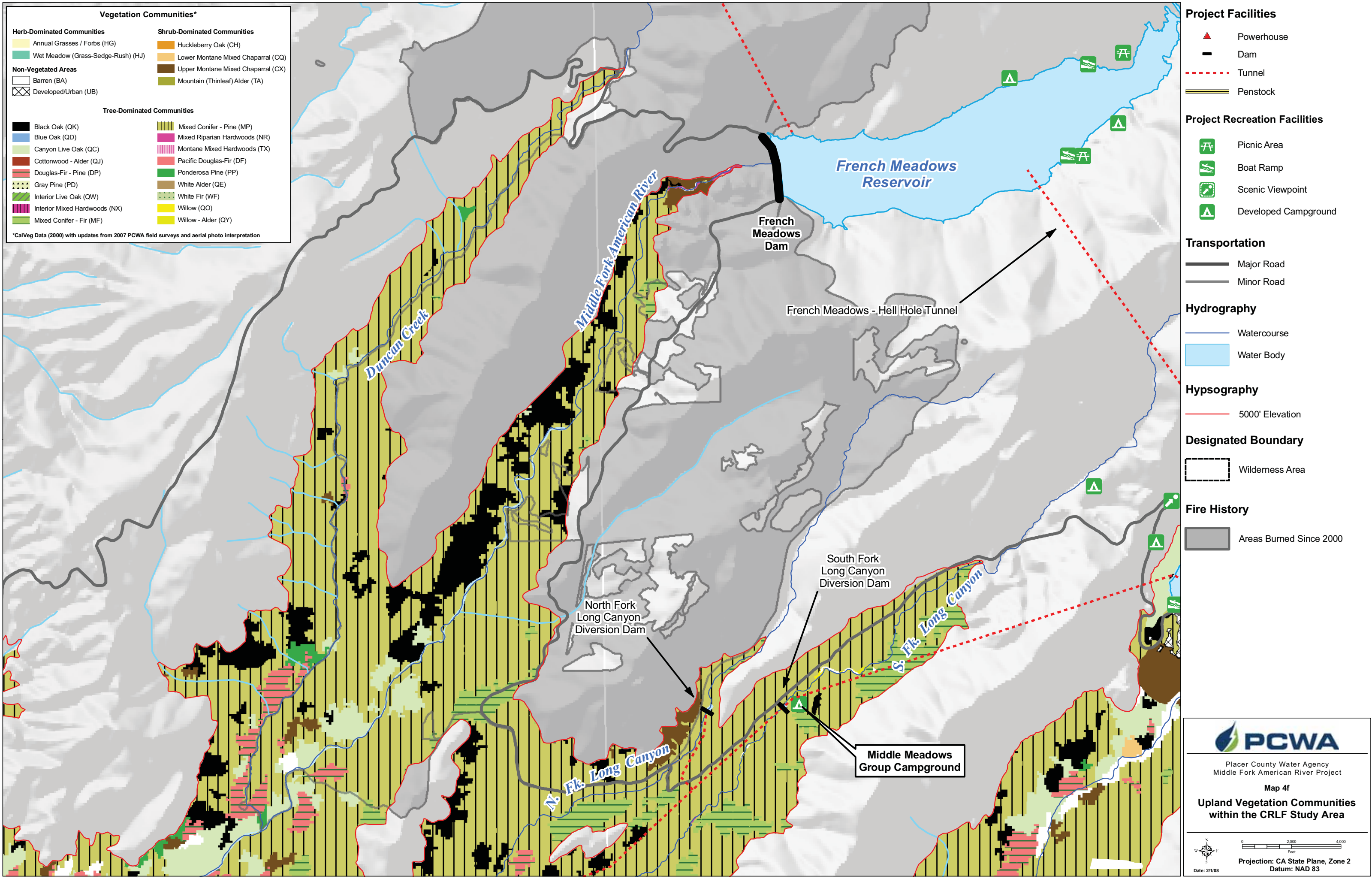
Placer County Water Agency
Middle Fork American River Project

Map 4e
Upland Vegetation Communities within the CRLF Study Area

0 2,000 4,000
Feet

Projection: CA State Plane, Zone 2
Datum: NAD 83

Date: 2/1/08



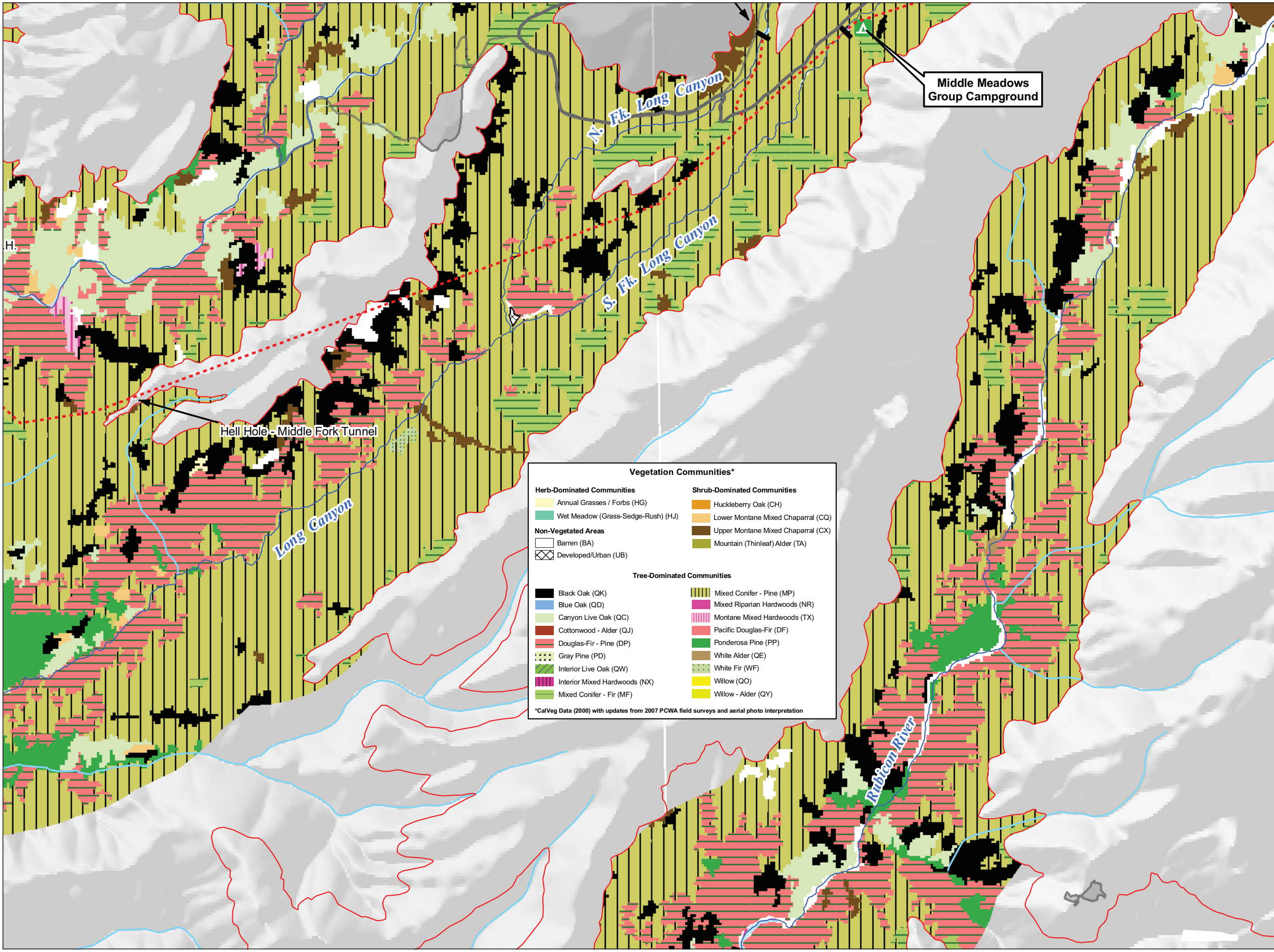
Placer County Water Agency
Middle Fork American River Project

Map 4f
Upland Vegetation Communities
within the CRLF Study Area

0 2,000 4,000
Feet

Projection: CA State Plane, Zone 2
Datum: NAD 83

Date: 2/1/08



- Project Facilities**
- Powerhouse
 - Dam
 - Tunnel
 - Penstock
- Project Recreation Facilities**
- Picnic Area
 - Boat Ramp
 - Scenic Viewpoint
 - Developed Campground
- Transportation**
- Major Road
 - Minor Road
- Hydrography**
- Watercourse
 - Water Body
- Hypsography**
- 5000' Elevation
- Designated Boundary**
- Wilderness Area
- Fire History**
- Areas Burned Since 2000

Vegetation Communities*

Herb-Dominated Communities		Shrub-Dominated Communities	
Annual Grasses / Forbs (HG)	Wet Meadow (Grass-Sedge-Rush) (HJ)	Huckleberry Oak (CH)	Lower Montane Mixed Chaparral (CQ)
Non-Vegetated Areas		Upper Montane Mixed Chaparral (CX)	
Barren (BA)	Developed/Urban (UB)	Mountain (Thinleaf) Alder (TA)	
Tree-Dominated Communities			
Black Oak (QK)	Blue Oak (QD)	Mixed Conifer - Pine (MP)	Mixed Riparian Hardwoods (NR)
Canyon Live Oak (QC)	Cottonwood - Alder (QJ)	Montane Mixed Hardwoods (TX)	Pacific Douglas-Fir (DF)
Douglas-Fir - Pine (DP)	Gray Pine (PD)	Ponderosa Pine (PP)	White Alder (QE)
Interior Live Oak (QW)	Interior Mixed Hardwoods (NX)	White Fir (WF)	Willow (QO)
Mixed Conifer - Fir (MF)		Willow - Alder (QY)	

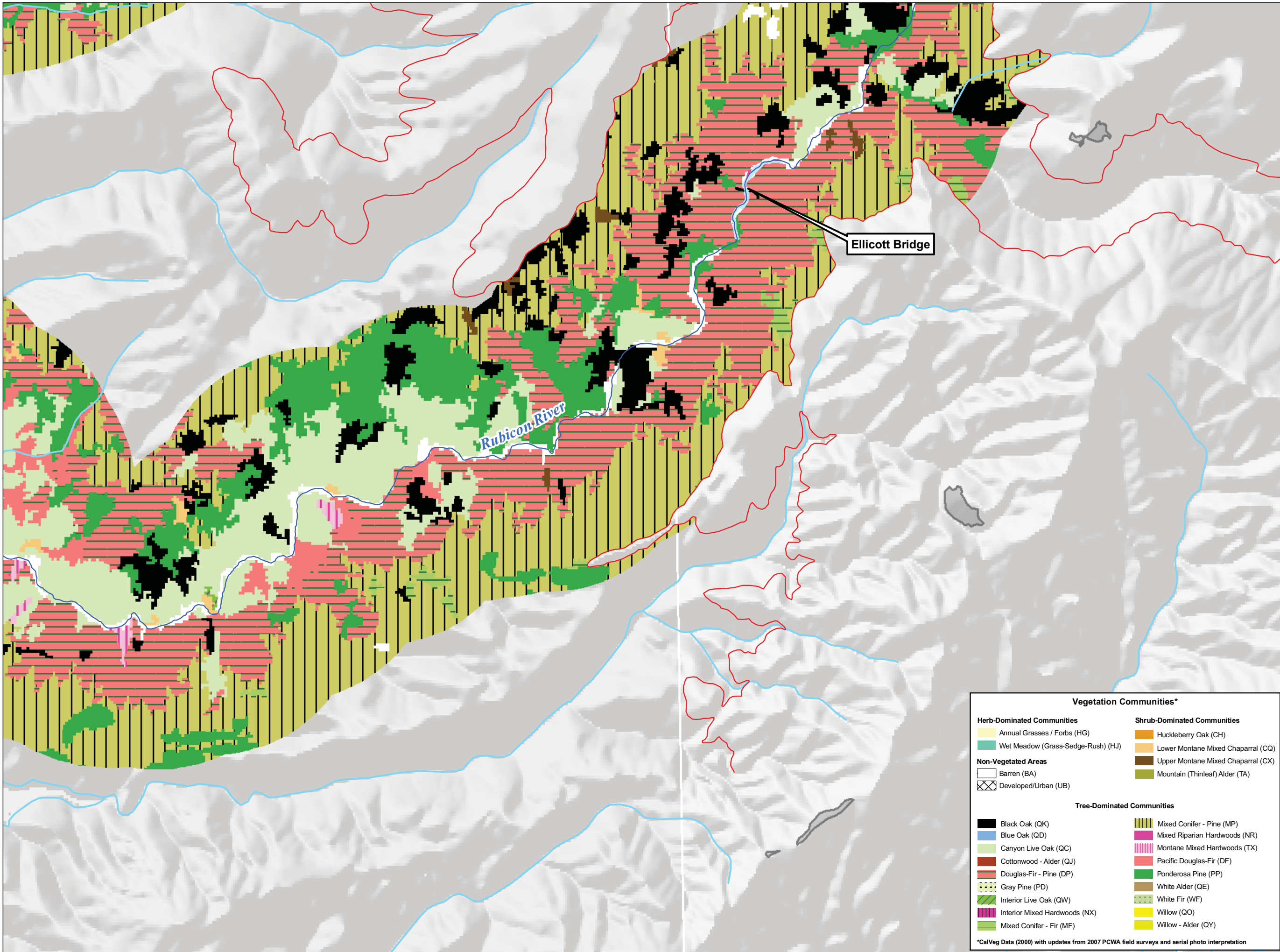
*CalVeg Data (2000) with updates from 2007 PCWA field surveys and aerial photo interpretation

Placer County Water Agency
Middle Fork American River Project

Map 4g
Upland Vegetation Communities
within the CRLF Study Area

Date: 2/1/08

Projection: CA State Plane, Zone 2
Datum: NAD 83



- Project Facilities**
- Powerhouse
 - Dam
 - Tunnel
 - Penstock
- Project Recreation Facilities**
- Picnic Area
 - Boat Ramp
 - Scenic Viewpoint
 - Developed Campground
- Transportation**
- Major Road
 - Minor Road
- Hydrography**
- Watercourse
 - Water Body
- Hypsography**
- 5000' Elevation
- Designated Boundary**
- Wilderness Area
- Fire History**
- Areas Burned Since 2000

Vegetation Communities*

Herb-Dominated Communities		Shrub-Dominated Communities	
Annual Grasses / Forbs (HG)	Wet Meadow (Grass-Sedge-Rush) (HJ)	Huckleberry Oak (CH)	Lower Montane Mixed Chaparral (CQ)
Non-Vegetated Areas		Upper Montane Mixed Chaparral (CX)	Mountain (Thinleaf) Alder (TA)
Barren (BA)	Developed/Urban (UB)	Tree-Dominated Communities	
Black Oak (QK)	Blue Oak (QD)	Mixed Conifer - Pine (MP)	Mixed Riparian Hardwoods (NR)
Canyon Live Oak (QC)	Cottonwood - Alder (QJ)	Montane Mixed Hardwoods (TX)	Pacific Douglas-Fir (DF)
Douglas-Fir - Pine (DP)	Gray Pine (PD)	Ponderosa Pine (PP)	White Alder (QE)
Interior Live Oak (QW)	Interior Mixed Hardwoods (NX)	White Fir (WF)	Willow (QO)
Mixed Conifer - Fir (MF)	Willow - Alder (QY)	<small>*CalVeg Data (2000) with updates from 2007 PCWA field surveys and aerial photo interpretation</small>	

PCWA

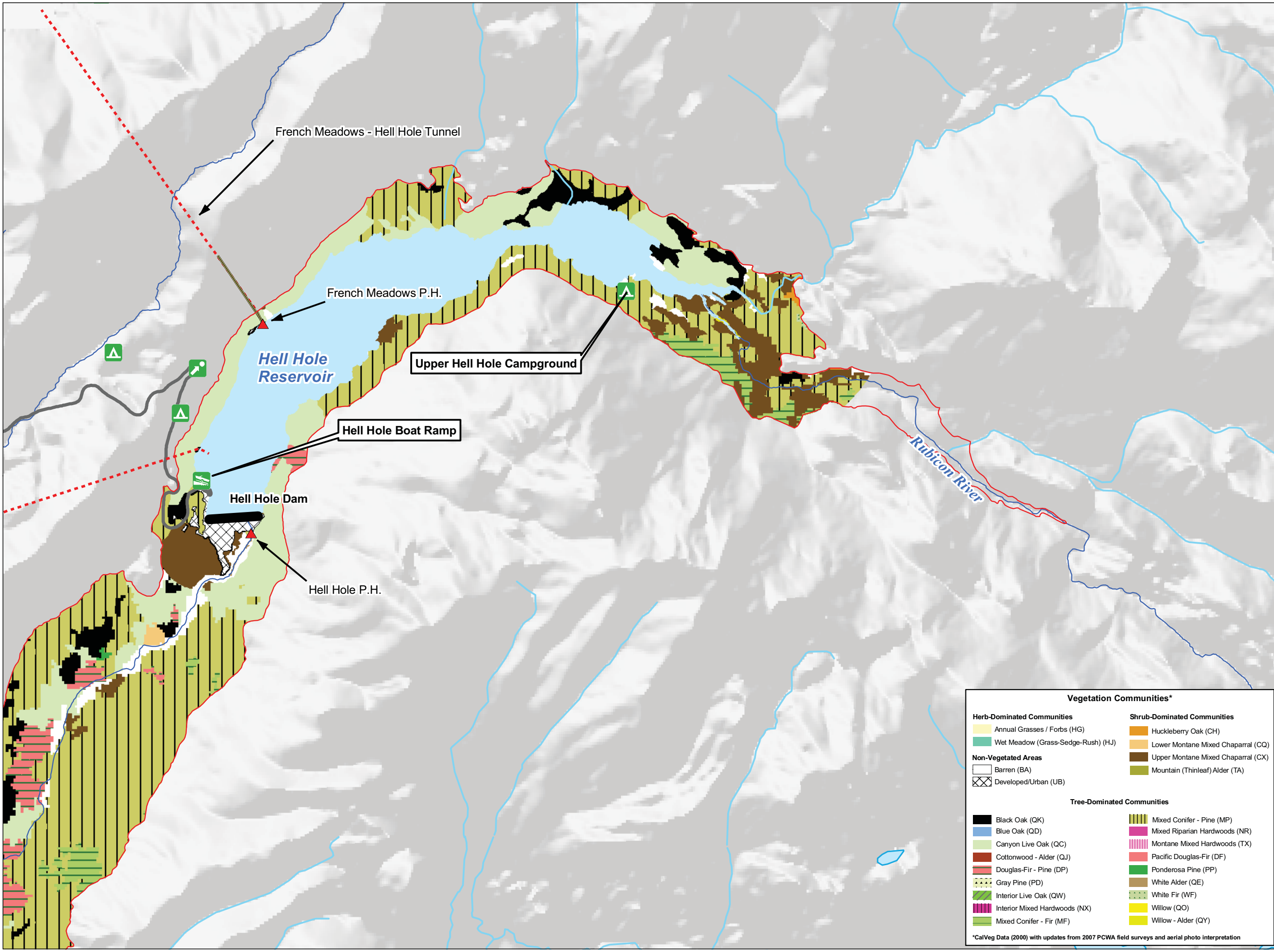
Placer County Water Agency
Middle Fork American River Project

Map 4h
Upland Vegetation Communities
within the CRLF Study Area

Scale: 0, 2,000, 4,000 Feet

Projection: CA State Plane, Zone 2
Datum: NAD 83

Date: 2/1/08



- Project Facilities**
- Powerhouse
 - Dam
 - Tunnel
 - Penstock
- Project Recreation Facilities**
- Picnic Area
 - Boat Ramp
 - Scenic Viewpoint
 - Developed Campground
- Transportation**
- Major Road
 - Minor Road
- Hydrography**
- Watercourse
 - Water Body
- Hypsography**
- 5000' Elevation
- Designated Boundary**
- Wilderness Area
- Fire History**
- Areas Burned Since 2000

Vegetation Communities*

Herb-Dominated Communities		Shrub-Dominated Communities	
Annual Grasses / Forbs (HG)	Wet Meadow (Grass-Sedge-Rush) (HJ)	Huckleberry Oak (CH)	Lower Montane Mixed Chaparral (CQ)
Non-Vegetated Areas		Upper Montane Mixed Chaparral (CX)	Mountain (Thinleaf) Alder (TA)
Barren (BA)	Developed/Urban (UB)		
Tree-Dominated Communities			
Black Oak (QK)	Blue Oak (QD)	Mixed Conifer - Pine (MP)	Mixed Riparian Hardwoods (NR)
Canyon Live Oak (QC)	Cottonwood - Alder (QJ)	Montane Mixed Hardwoods (TX)	Pacific Douglas-Fir (DF)
Douglas-Fir - Pine (DP)	Gray Pine (PD)	Ponderosa Pine (PP)	White Alder (QE)
Interior Live Oak (QW)	Interior Mixed Hardwoods (NX)	White Fir (WF)	Willow (QO)
Mixed Conifer - Fir (MF)		Willow - Alder (QY)	

*CalVeg Data (2000) with updates from 2007 PCWA field surveys and aerial photo interpretation

PCWA

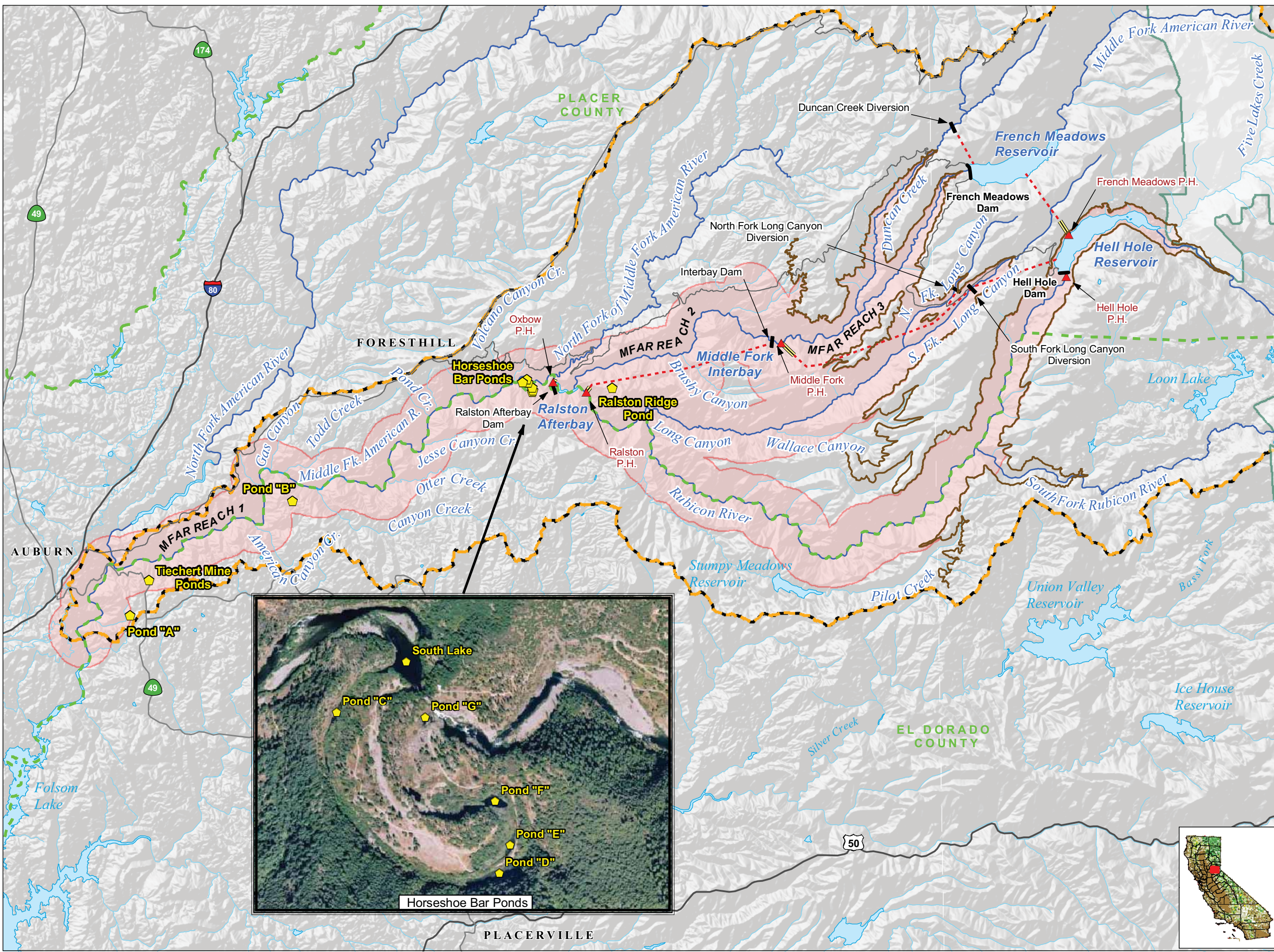
Placer County Water Agency
Middle Fork American River Project

Map 4i
Upland Vegetation Communities
within the CRLF Study Area

0 2,000 4,000 Feet

Projection: CA State Plane, Zone 2
Datum: NAD 83

Date: 2/1/08



- Project Facilities**
- Powerhouse
 - Dam
 - Tunnel
 - Penstock
- Transportation**
- Major Road
 - Minor Road
- Hydrography**
- Watercourse
 - Water Body
 - Middle Fork American River Watershed*
- Designated Boundary**
- County Boundary
 - Wilderness Area
- 2007 CRLF Survey Data**
- Pond Locations
 - CRLF Study Area**
 - 5000' Elevation
- ** Within one mile of MFP and under 5000' elevation



PCWA
Placer County Water Agency
Middle Fork American River Project

Map 5
Rivers, Creeks, Reservoirs, Diversion Pools, and Off-Channel Ponds in the CRLF Study Area

0 1 2 3
Miles

Projection: CA State Plane, Zone 2
Datum: NAD 83

Date: 2/13/08