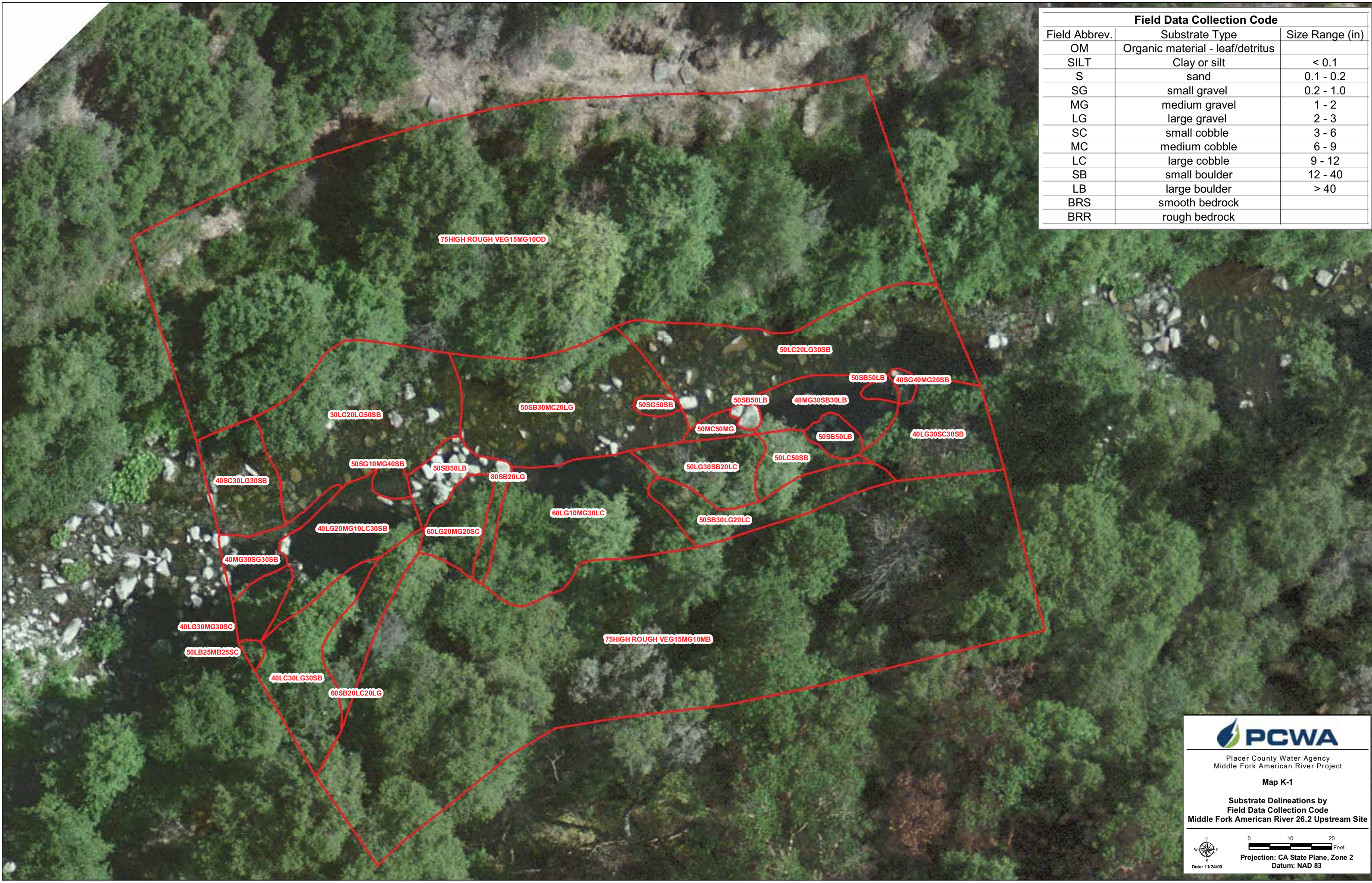


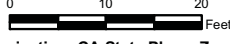


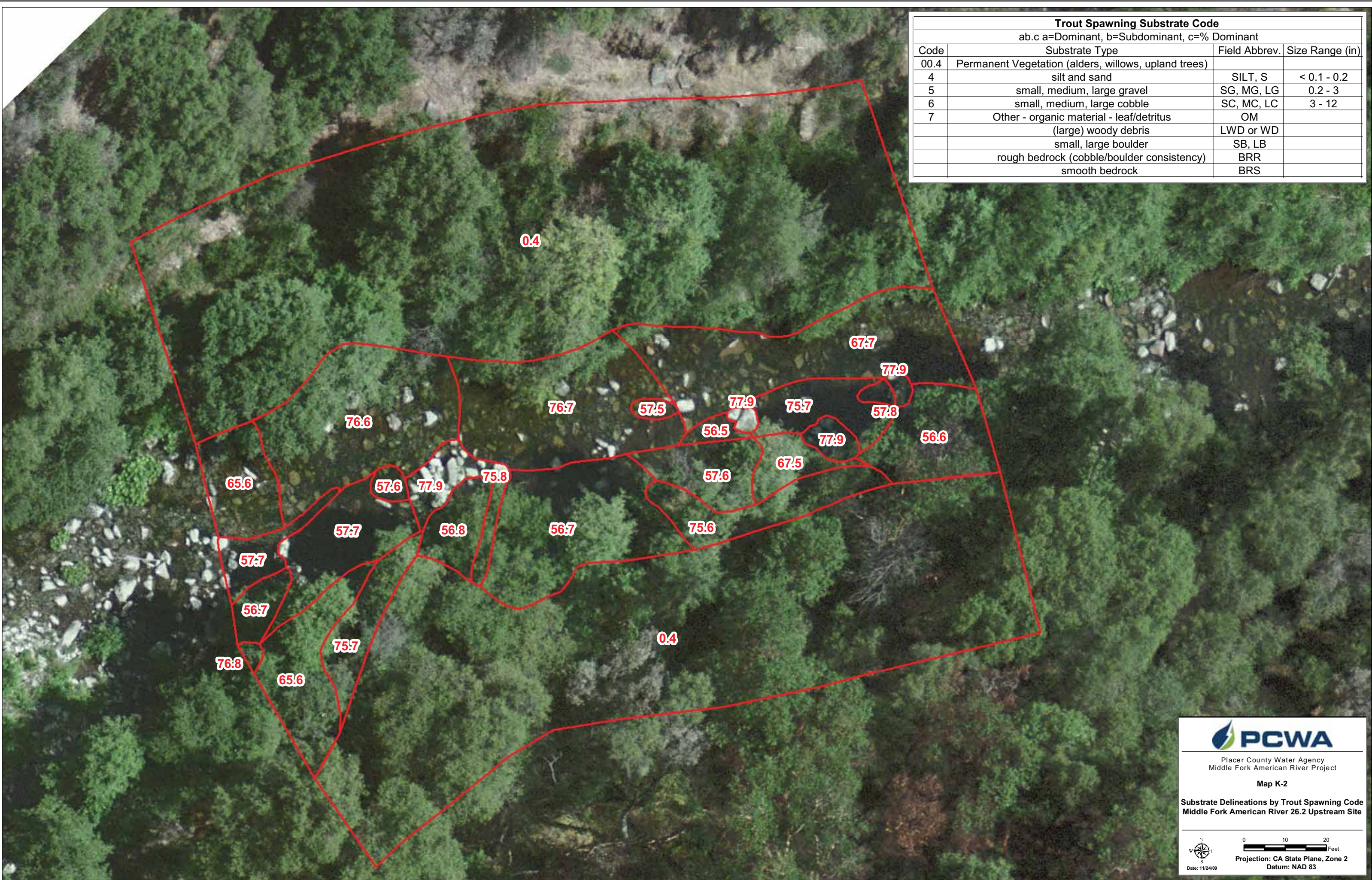
Field Data Collection Code		
Field Abbrev.	Substrate Type	Size Range (in)
OM	Organic material - leaf/detritus	
SILT	Clay or silt	< 0.1
S	sand	0.1 - 0.2
SG	small gravel	0.2 - 1.0
MG	medium gravel	1 - 2
LG	large gravel	2 - 3
SC	small cobble	3 - 6
MC	medium cobble	6 - 9
LC	large cobble	9 - 12
SB	small boulder	12 - 40
LB	large boulder	> 40
BRS	smooth bedrock	
BRR	rough bedrock	




 Placer County Water Agency
 Middle Fork American River Project
Map K-1
**Substrate Delineations by
 Field Data Collection Code**
Middle Fork American River 26.2 Upstream Site



 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

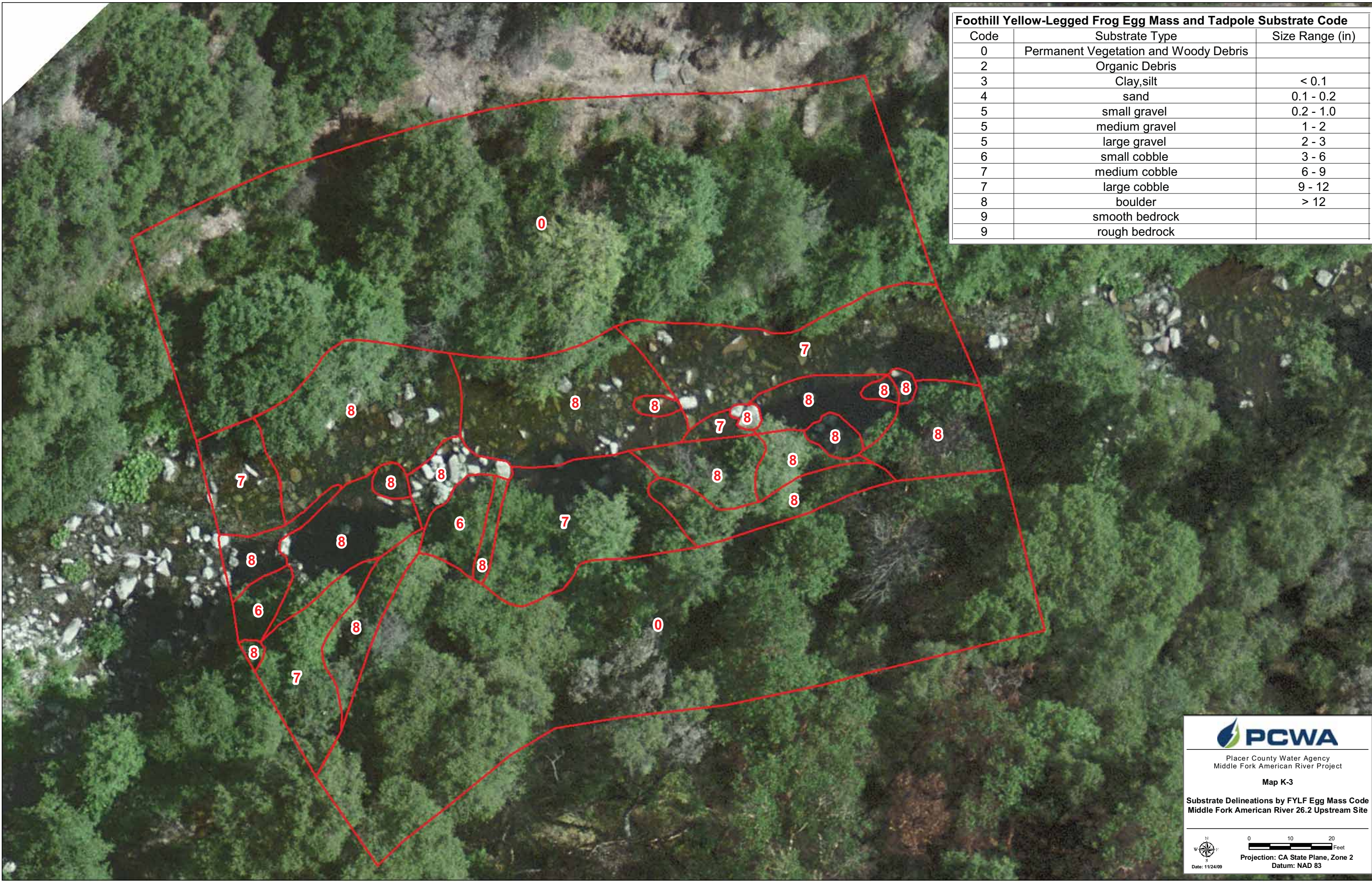
Trout Spawning Substrate Code			
ab.c a=Dominant, b=Subdominant, c=% Dominant			
Code	Substrate Type	Field Abbrev.	Size Range (in)
00.4	Permanent Vegetation (alders, willows, upland trees)		
4	silt and sand	SILT, S	< 0.1 - 0.2
5	small, medium, large gravel	SG, MG, LG	0.2 - 3
6	small, medium, large cobble	SC, MC, LC	3 - 12
7	Other - organic material - leaf/detritus	OM	
	(large) woody debris	LWD or WD	
	small, large boulder	SB, LB	
	rough bedrock (cobble/boulder consistency)	BRR	
	smooth bedrock	BRS	



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 Middle Fork American River Project
Map K-2
Substrate Delineations by Trout Spawning Code
Middle Fork American River 26.2 Upstream Site

0 10 20 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	



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 Placer County Water Agency
 Middle Fork American River Project

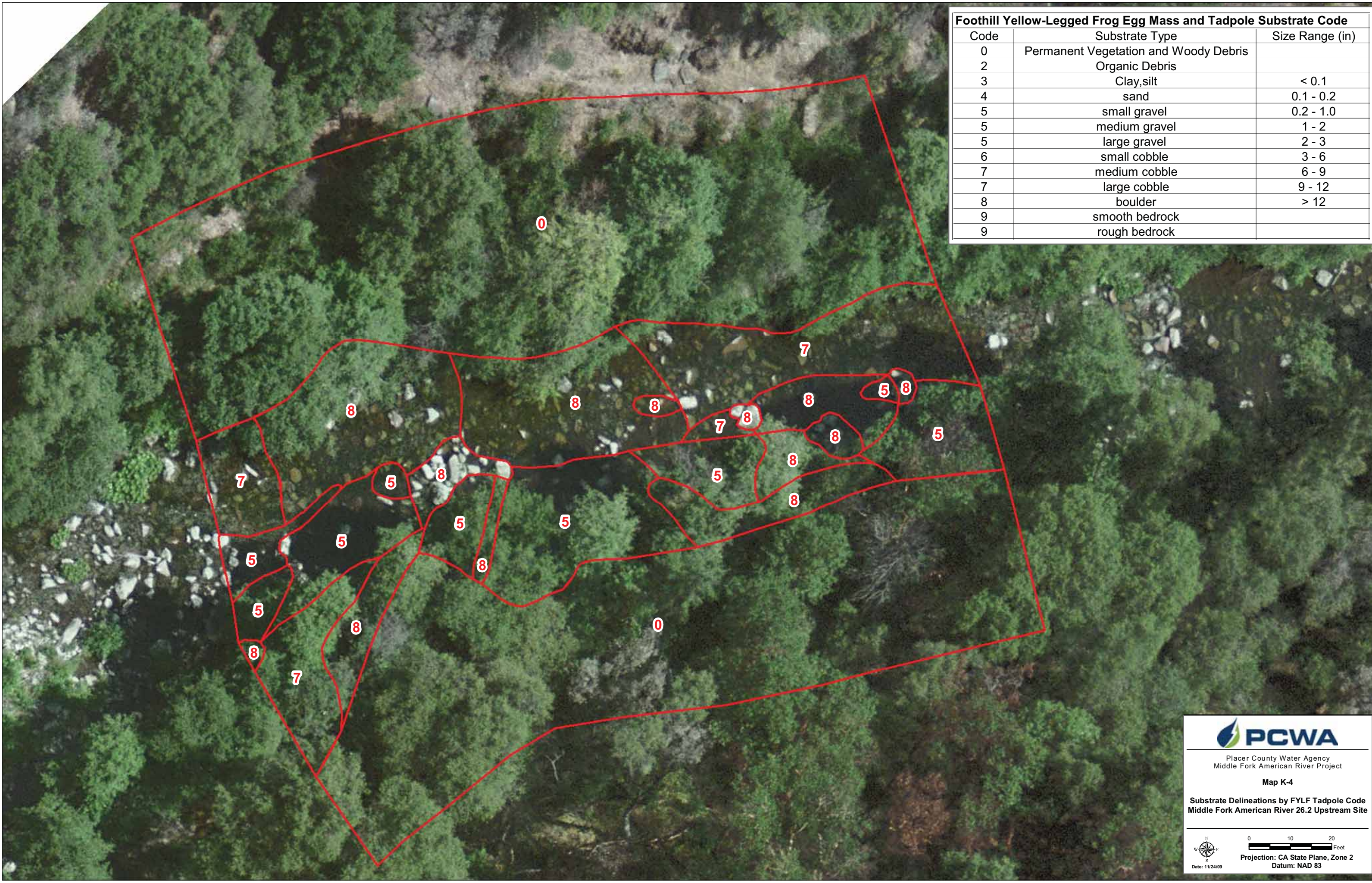
Map K-3


Substrate Delineations by FYLF Egg Mass Code
Middle Fork American River 26.2 Upstream Site

0 10 20 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83


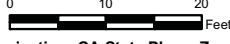
Date: 11/24/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	



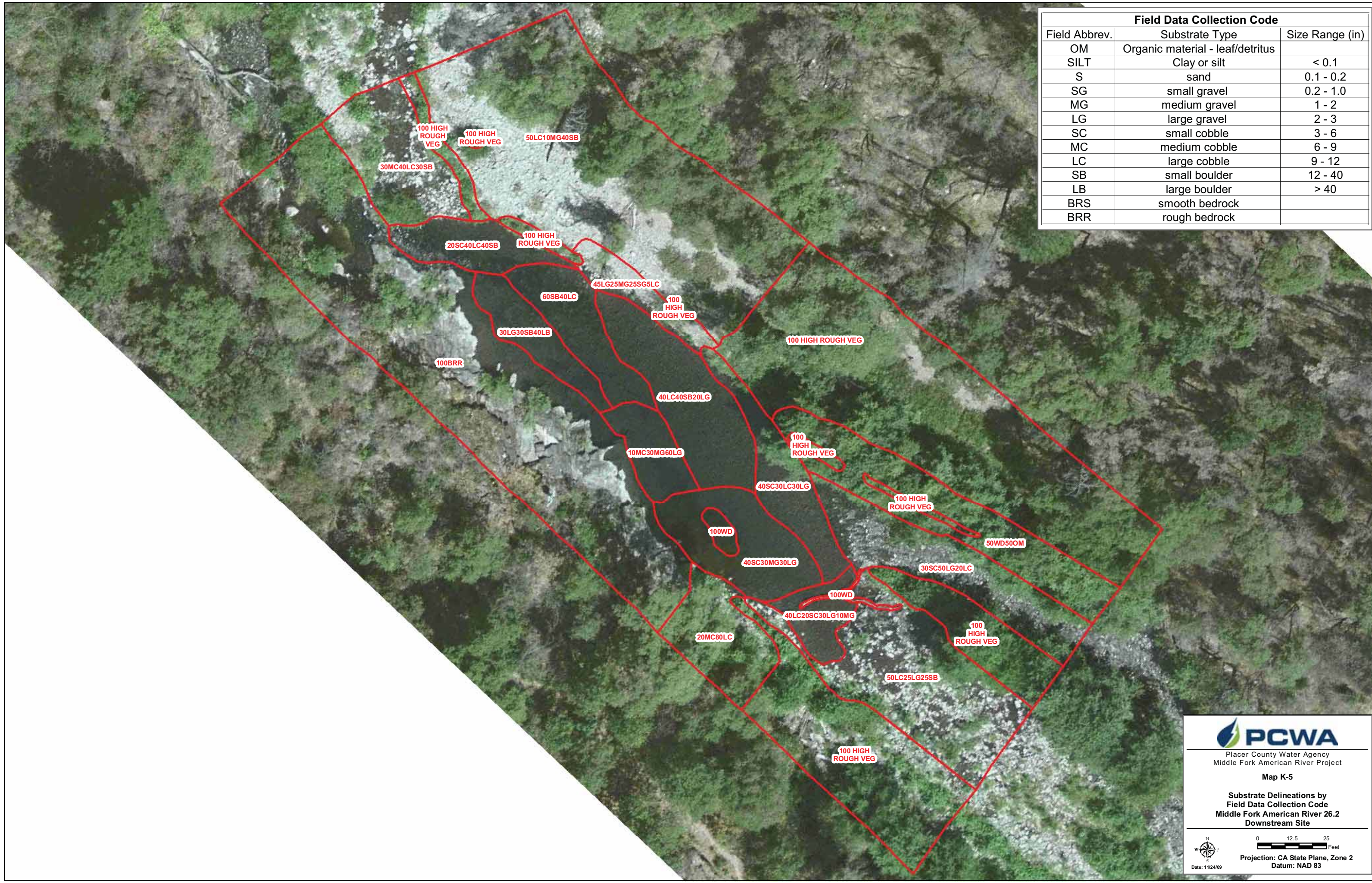



 Placer County Water Agency
 Middle Fork American River Project
Map K-4
Substrate Delineations by FYLF Tadpole Code
Middle Fork American River 26.2 Upstream Site


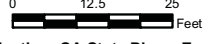



 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

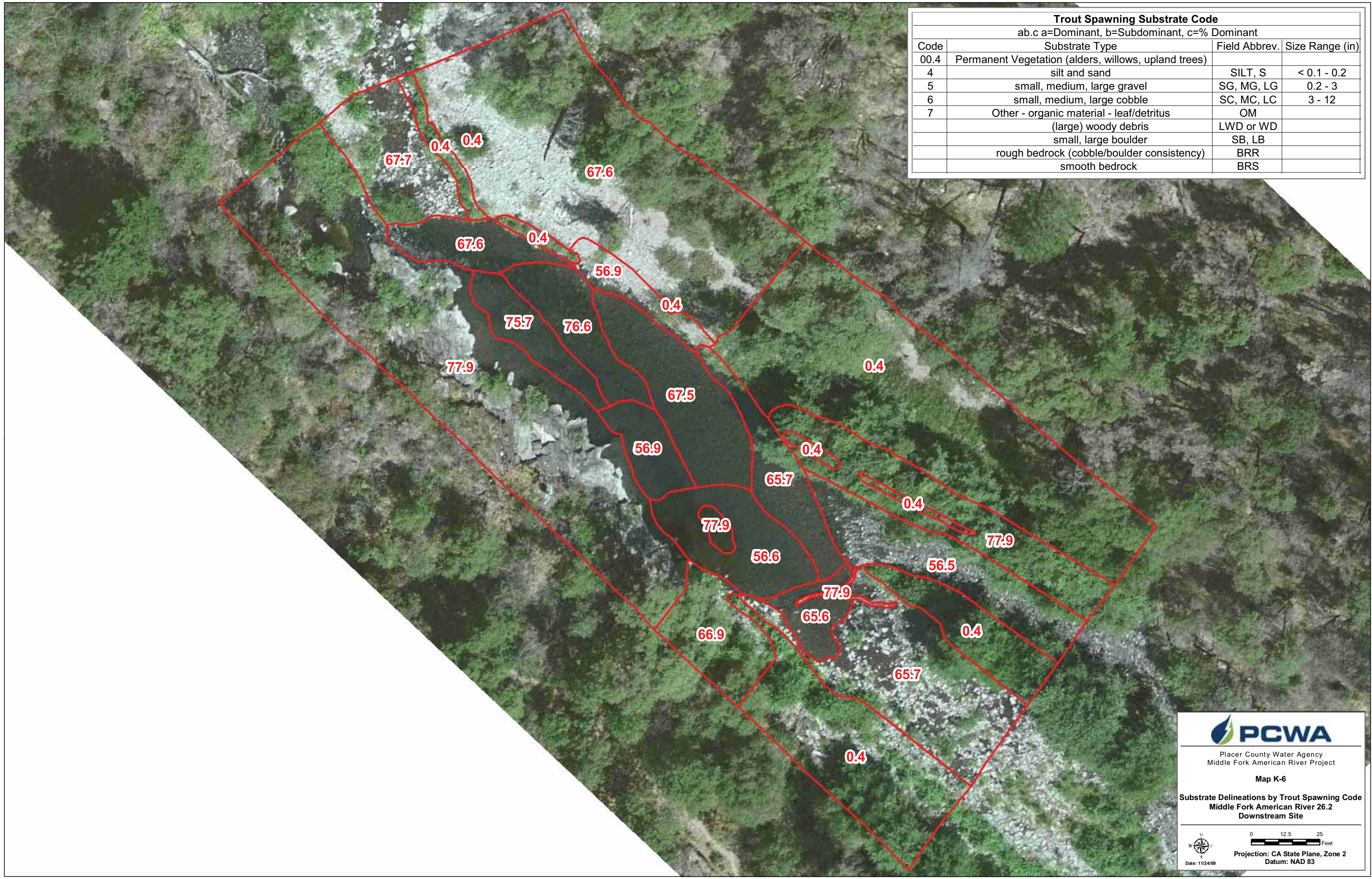
Field Data Collection Code		
Field Abbrev.	Substrate Type	Size Range (in)
OM	Organic material - leaf/detritus	
SILT	Clay or silt	< 0.1
S	sand	0.1 - 0.2
SG	small gravel	0.2 - 1.0
MG	medium gravel	1 - 2
LG	large gravel	2 - 3
SC	small cobble	3 - 6
MC	medium cobble	6 - 9
LC	large cobble	9 - 12
SB	small boulder	12 - 40
LB	large boulder	> 40
BRS	smooth bedrock	
BRR	rough bedrock	




 Placer County Water Agency
 Middle Fork American River Project
Map K-5
**Substrate Delineations by
 Field Data Collection Code**
**Middle Fork American River 26.2
 Downstream Site**



 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

Trout Spawning Substrate Code			
ab.c a=Dominant, b=Subdominant, c=% Dominant			
Code	Substrate Type	Field Abbrev.	Size Range (in)
00.4	Permanent Vegetation (alders, willows, upland trees)		
4	silt and sand	SILT, S	< 0.1 - 0.2
5	small, medium, large gravel	SG, MG, LG	0.2 - 3
6	small, medium, large cobble	SC, MC, LC	3 - 12
7	Other - organic material - leaf/detritus	OM	
	(large) woody debris	LWD or WD	
	small, large boulder	SB, LB	
	rough bedrock (cobble/boulder consistency)	BRR	
	smooth bedrock	BRS	



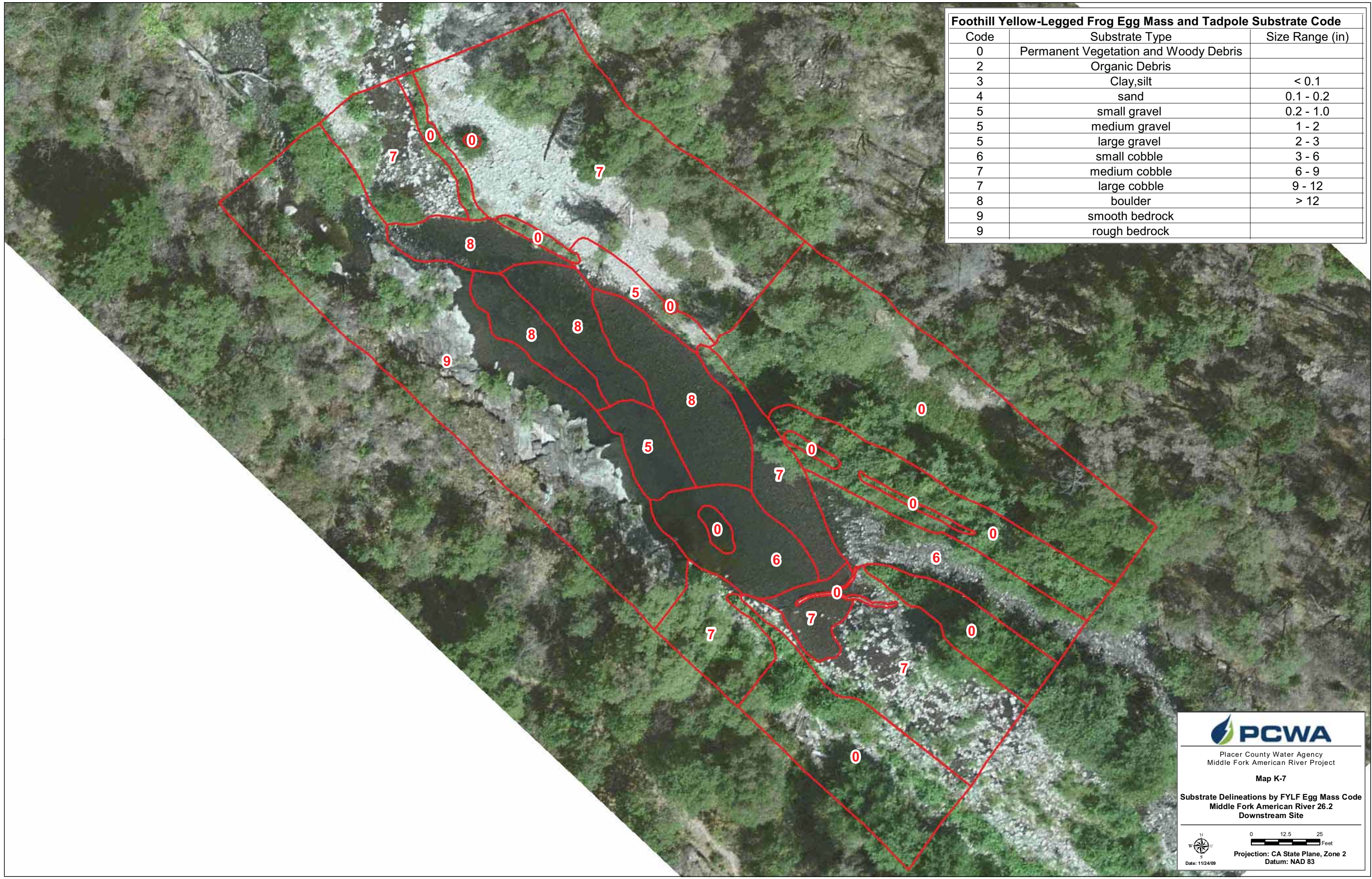
PCWA
 Placer County Water Agency
 Middle Fork American River Project


Map K-6
 Substrate Delineations by Trout Spawning Code
 Middle Fork American River 26.2
 Downstream Site

0 12.5 25 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83


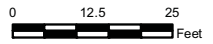
Date: 11/24/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	



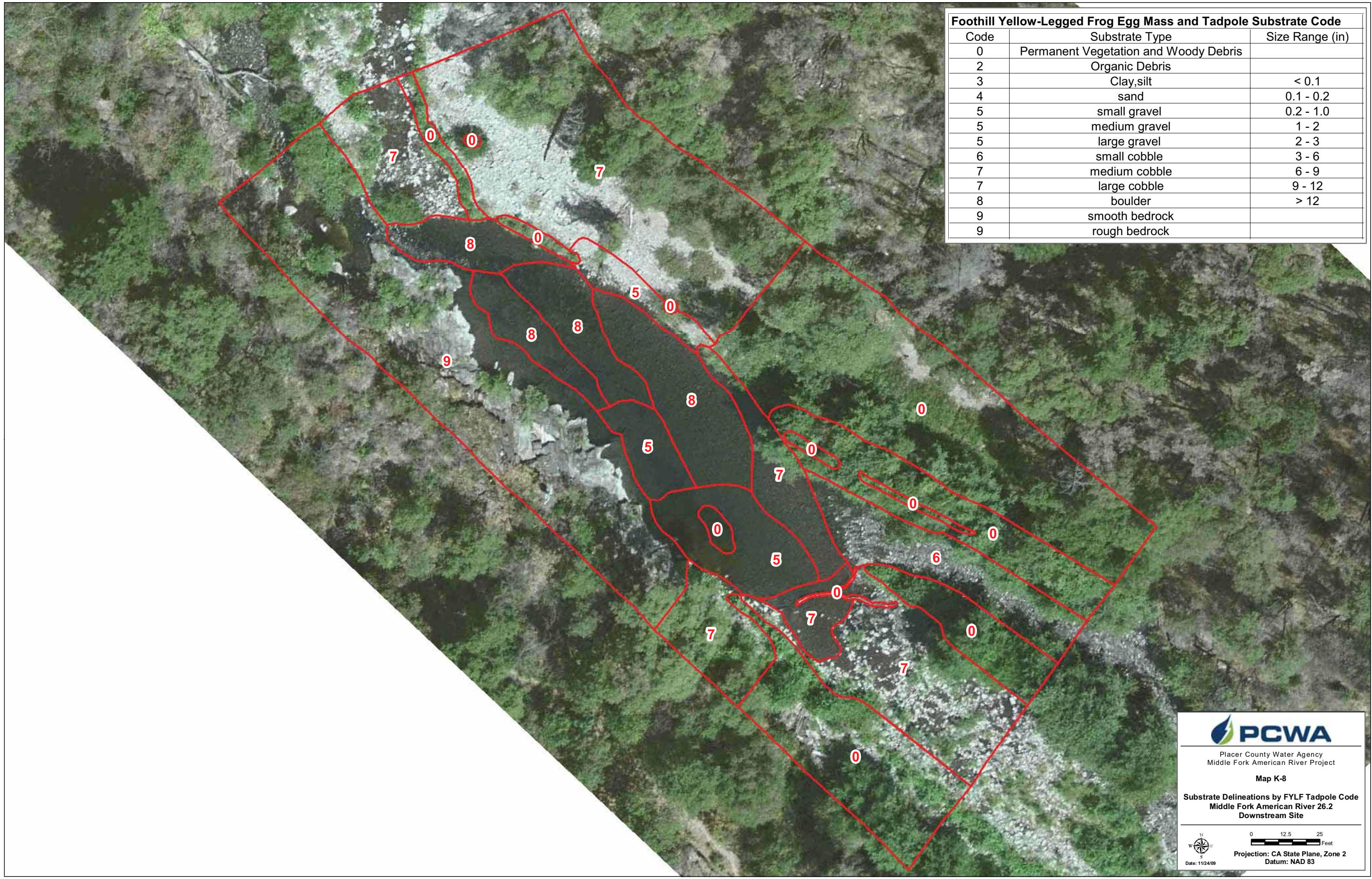



 Placer County Water Agency
 Middle Fork American River Project
Map K-7
Substrate Delineations by FYLF Egg Mass Code
Middle Fork American River 26.2
Downstream Site


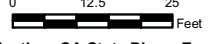



 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

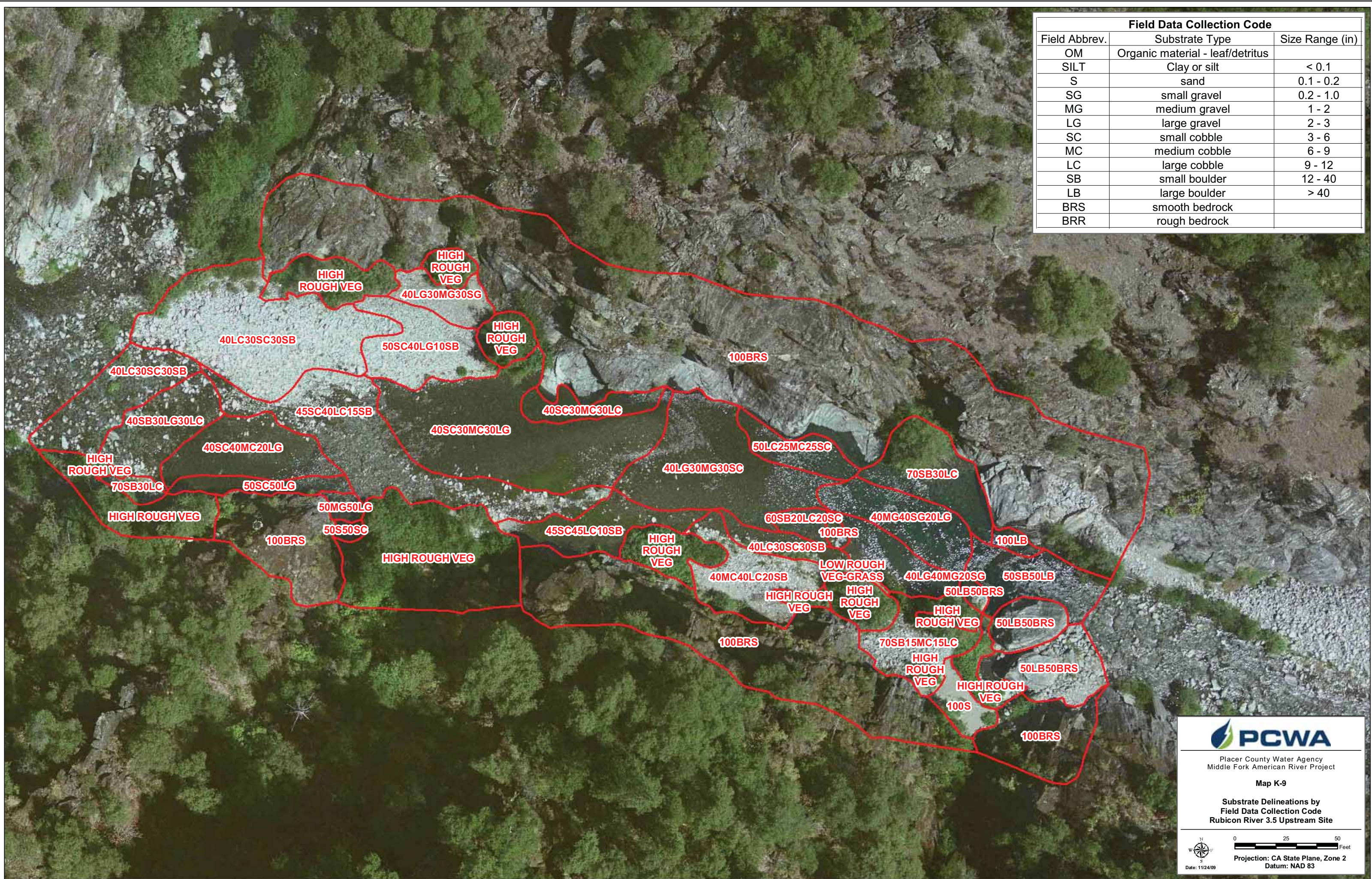
Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	




 Placer County Water Agency
 Middle Fork American River Project
Map K-8
Substrate Delineations by FYLF Tadpole Code
Middle Fork American River 26.2
Downstream Site



 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

Field Data Collection Code		
Field Abbrev.	Substrate Type	Size Range (in)
OM	Organic material - leaf/detritus	
SILT	Clay or silt	< 0.1
S	sand	0.1 - 0.2
SG	small gravel	0.2 - 1.0
MG	medium gravel	1 - 2
LG	large gravel	2 - 3
SC	small cobble	3 - 6
MC	medium cobble	6 - 9
LC	large cobble	9 - 12
SB	small boulder	12 - 40
LB	large boulder	> 40
BRS	smooth bedrock	
BRR	rough bedrock	



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 Placer County Water Agency
 Middle Fork American River Project

Map K-9

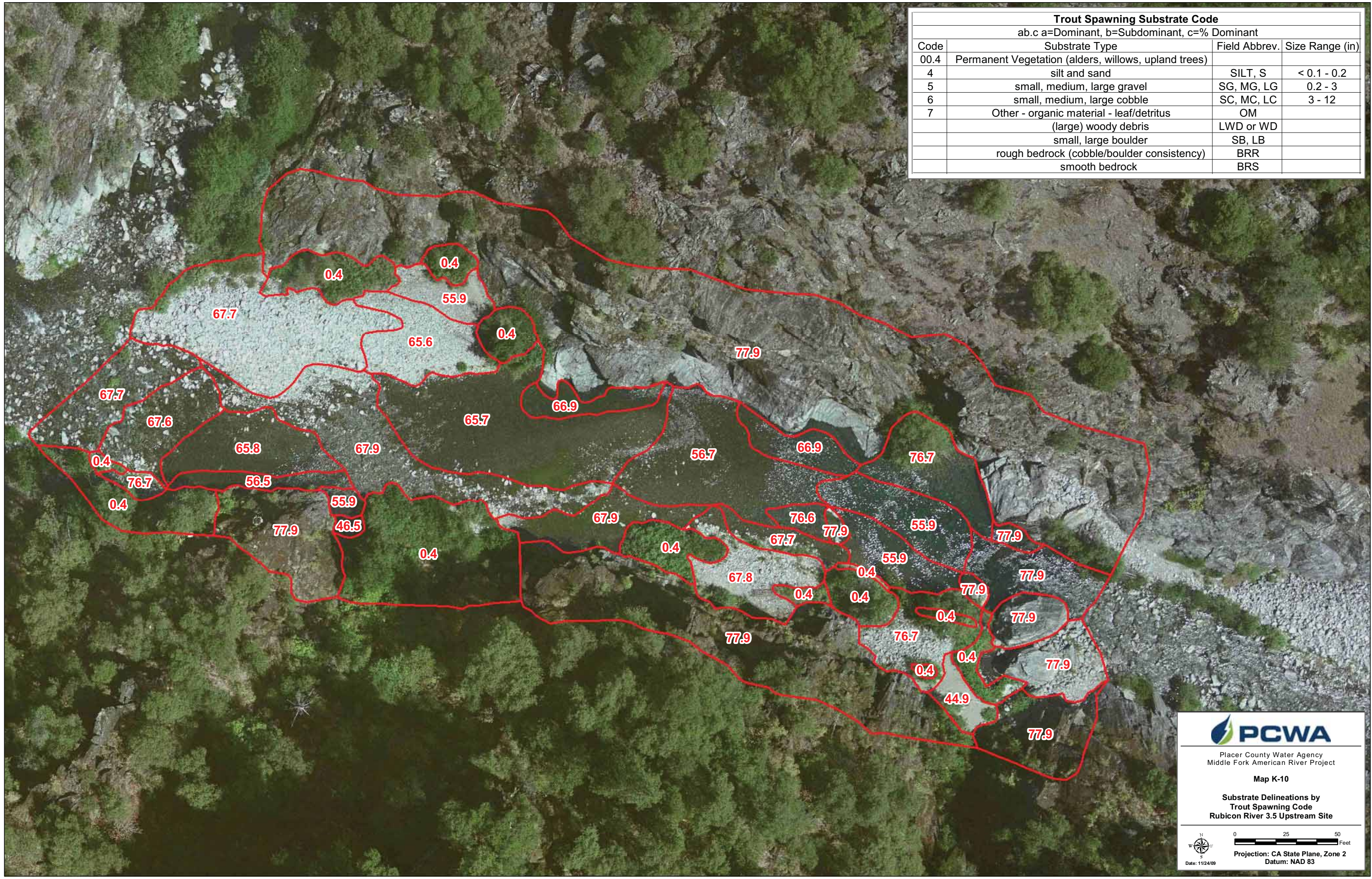

**Substrate Delineations by
 Field Data Collection Code
 Rubicon River 3.5 Upstream Site**

0 25 50 Feet

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

Date: 11/24/09

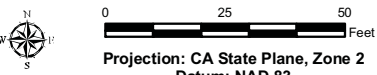
Trout Spawning Substrate Code			
ab.c a=Dominant, b=Subdominant, c=% Dominant			
Code	Substrate Type	Field Abbrev.	Size Range (in)
00.4	Permanent Vegetation (alders, willows, upland trees)		
4	silt and sand	SILT, S	< 0.1 - 0.2
5	small, medium, large gravel	SG, MG, LG	0.2 - 3
6	small, medium, large cobble	SC, MC, LC	3 - 12
7	Other - organic material - leaf/detritus	OM	
	(large) woody debris	LWD or WD	
	small, large boulder	SB, LB	
	rough bedrock (cobble/boulder consistency)	BRR	
	smooth bedrock	BRS	

Placer County Water Agency
Middle Fork American River Project

Map K-10

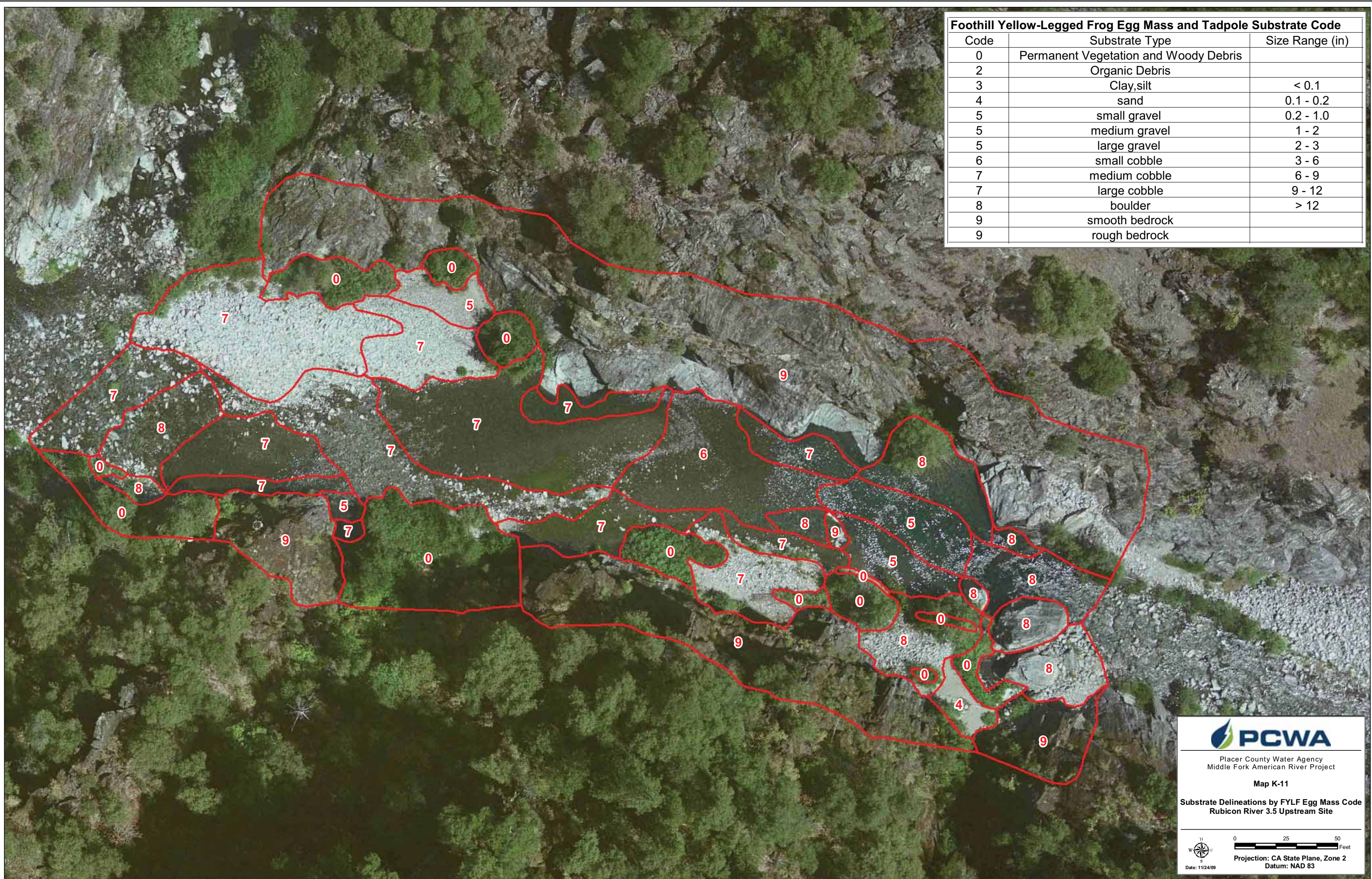
Substrate Delineations by Trout Spawning Code
Rubicon River 3.5 Upstream Site



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

Date: 11/24/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	

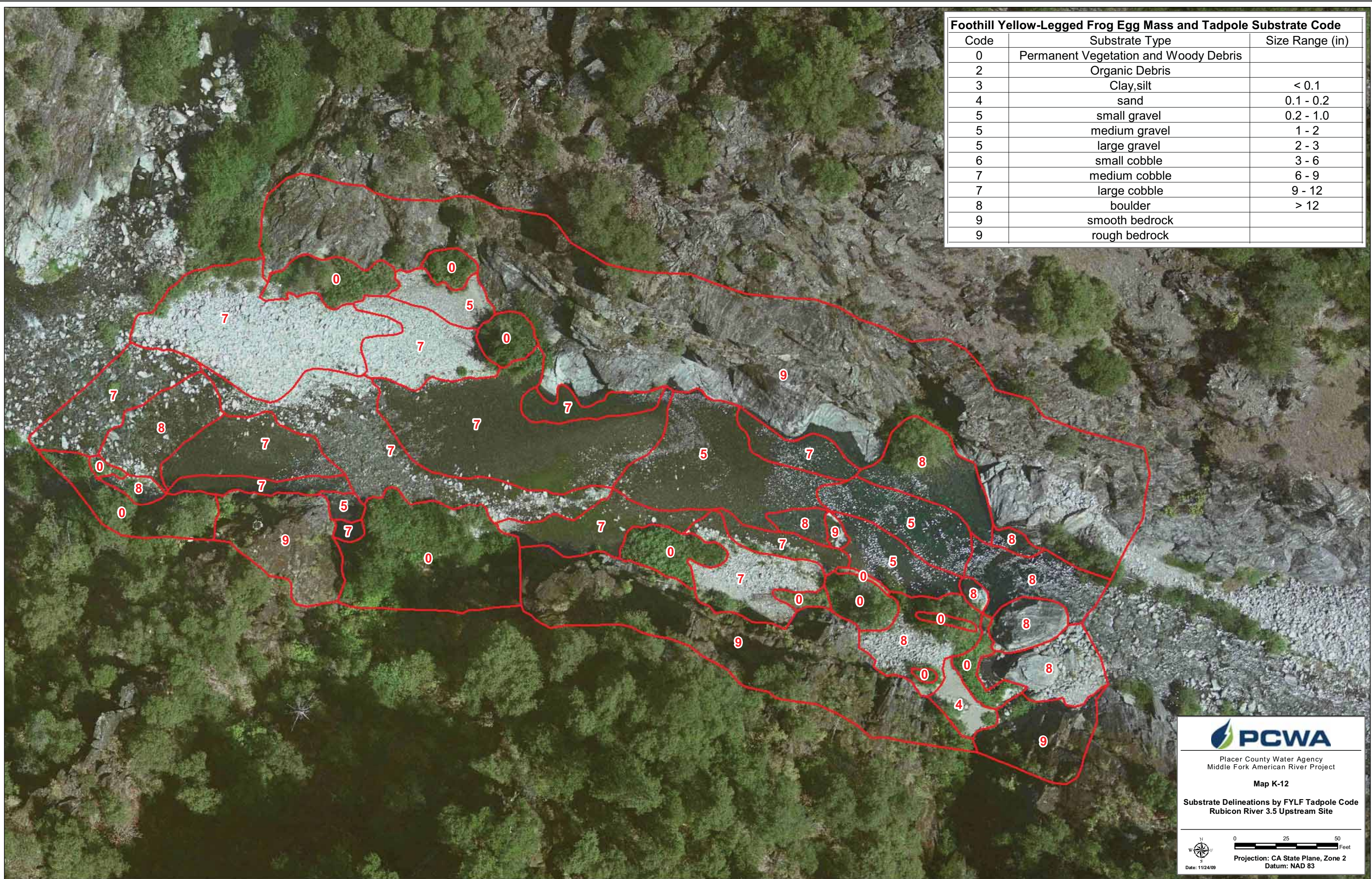


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 Placer County Water Agency
 Middle Fork American River Project

Map K-11
 Substrate Delineations by FYLF Egg Mass Code
 Rubicon River 3.5 Upstream Site

0 25 50 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	

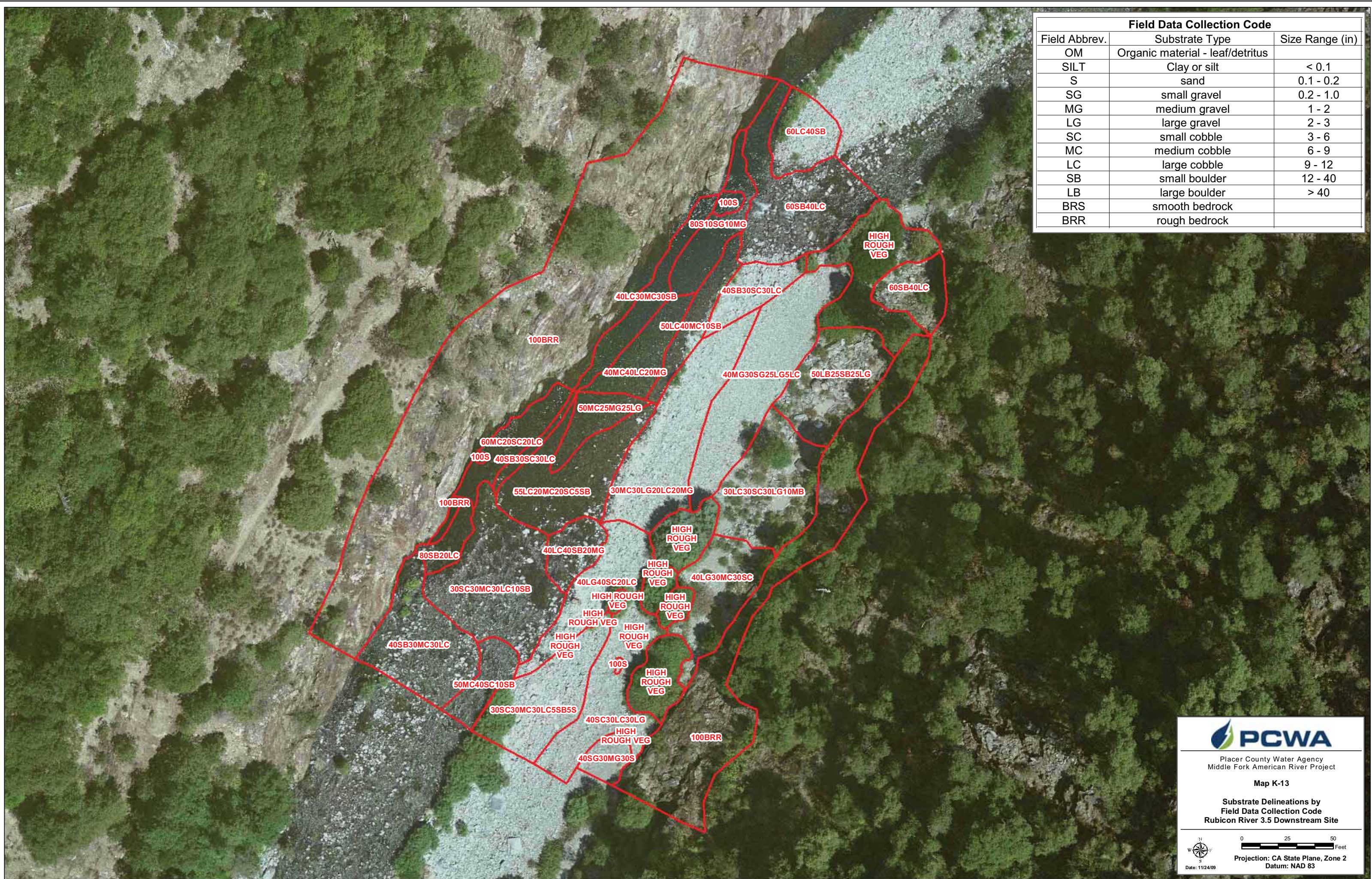



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 Placer County Water Agency
 Middle Fork American River Project


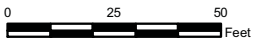
Map K-12
 Substrate Delineations by FYLF Tadpole Code
 Rubicon River 3.5 Upstream Site

0 25 50 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

Field Data Collection Code		
Field Abbrev.	Substrate Type	Size Range (in)
OM	Organic material - leaf/detritus	
SILT	Clay or silt	< 0.1
S	sand	0.1 - 0.2
SG	small gravel	0.2 - 1.0
MG	medium gravel	1 - 2
LG	large gravel	2 - 3
SC	small cobble	3 - 6
MC	medium cobble	6 - 9
LC	large cobble	9 - 12
SB	small boulder	12 - 40
LB	large boulder	> 40
BRS	smooth bedrock	
BRR	rough bedrock	

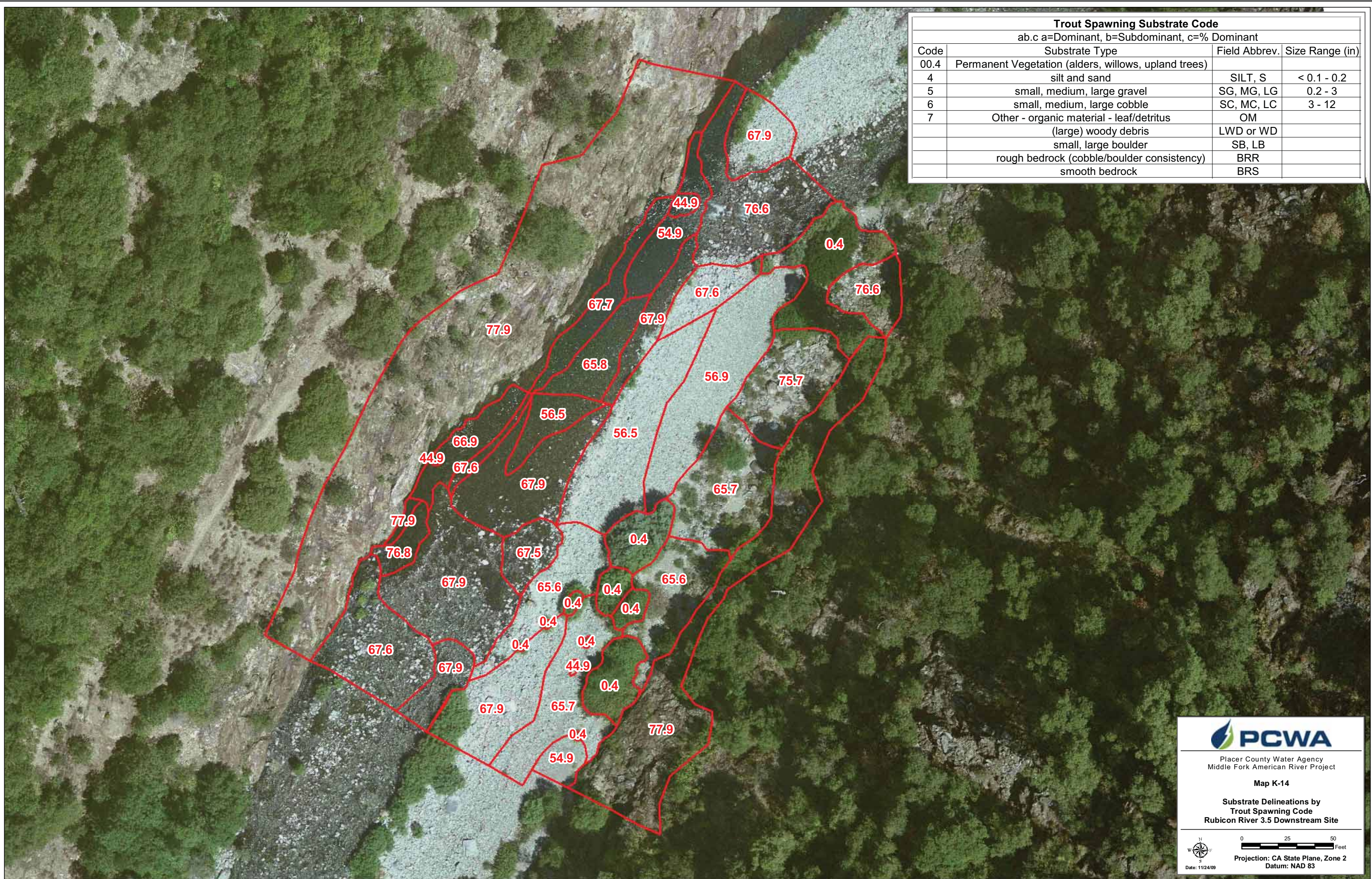




 Placer County Water Agency
 Middle Fork American River Project
Map K-13
**Substrate Delineations by
 Field Data Collection Code**
Rubicon River 3.5 Downstream Site

Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

Trout Spawning Substrate Code			
ab.c a=Dominant, b=Subdominant, c=% Dominant			
Code	Substrate Type	Field Abbrev.	Size Range (in)
00.4	Permanent Vegetation (alders, willows, upland trees)		
4	silt and sand	SILT, S	< 0.1 - 0.2
5	small, medium, large gravel	SG, MG, LG	0.2 - 3
6	small, medium, large cobble	SC, MC, LC	3 - 12
7	Other - organic material - leaf/detritus	OM	
	(large) woody debris	LWD or WD	
	small, large boulder	SB, LB	
	rough bedrock (cobble/boulder consistency)	BRR	
	smooth bedrock	BRS	


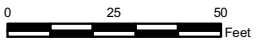




 Placer County Water Agency
 Middle Fork American River Project

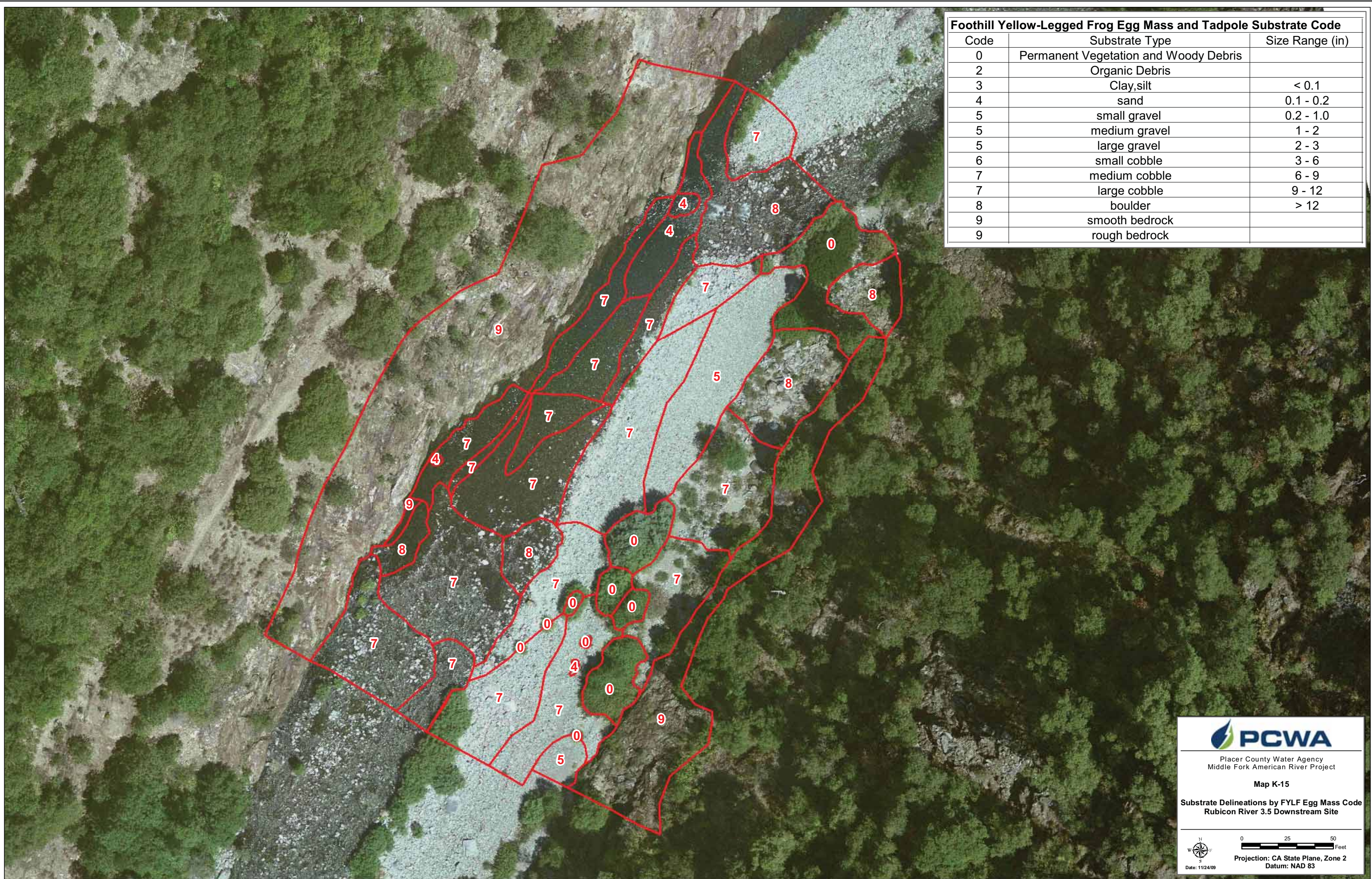
Map K-14


**Substrate Delineations by
 Trout Spawning Code**
Rubicon River 3.5 Downstream Site


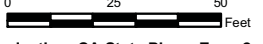



 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	

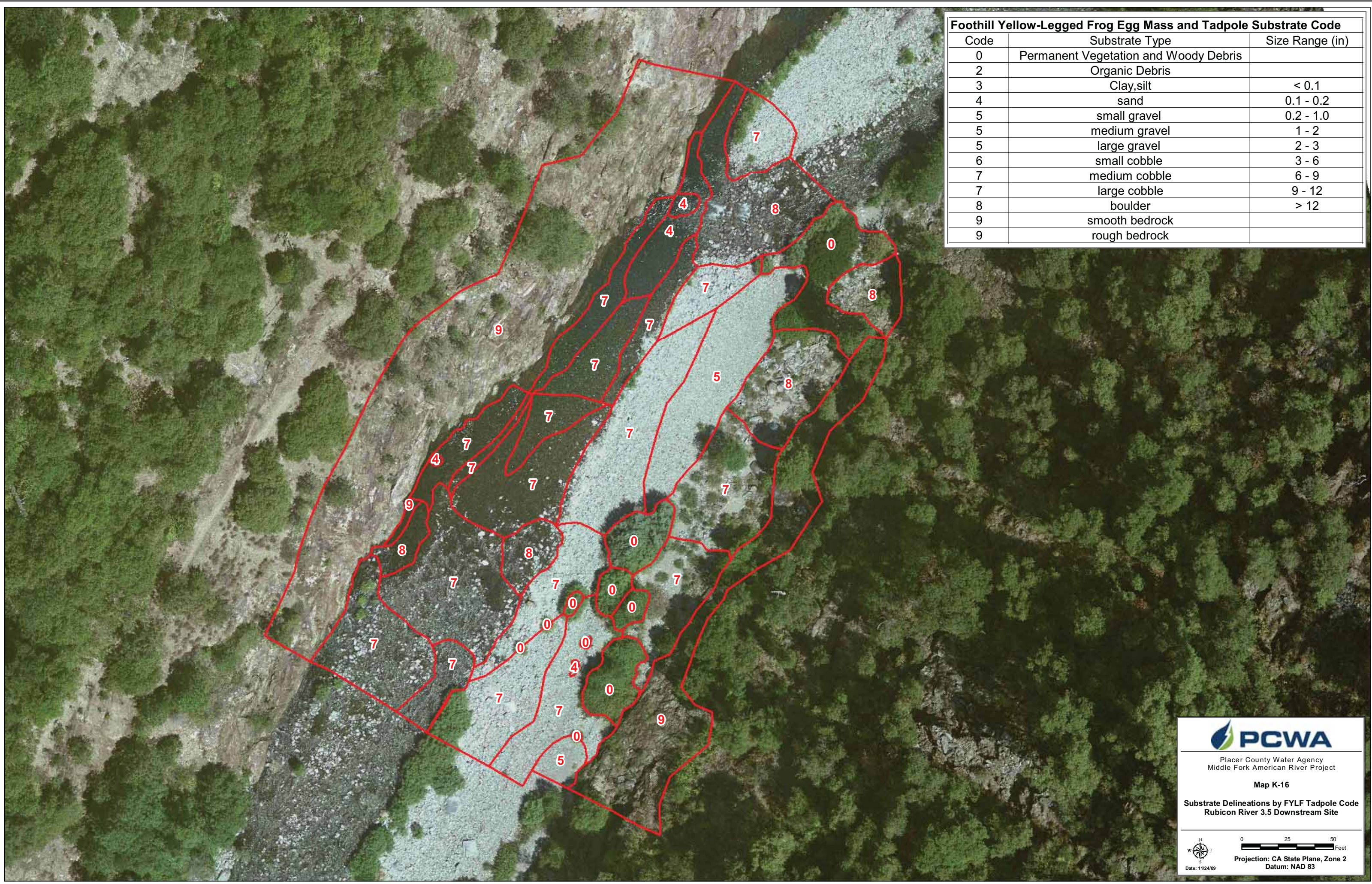




 Placer County Water Agency
 Middle Fork American River Project
Map K-15
Substrate Delineations by FYLF Egg Mass Code
Rubicon River 3.5 Downstream Site


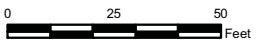
Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	



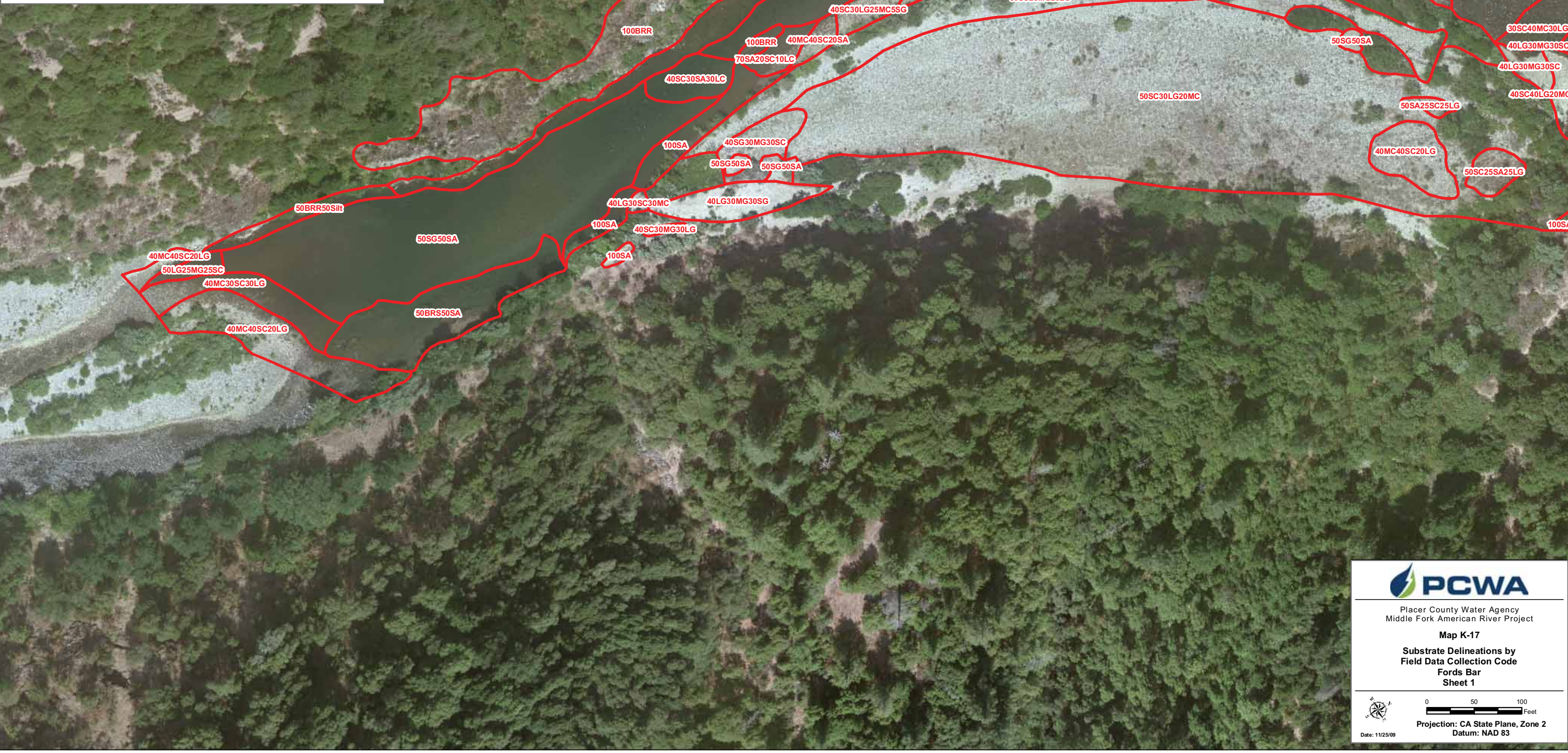


 Placer County Water Agency
 Middle Fork American River Project
Map K-16
Substrate Delineations by FYLF Tadpole Code
Rubicon River 3.5 Downstream Site

 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

Field Data Collection Code		
Field Abbrev.	Substrate Type	Size Range (in)
OM	Organic material - leaf/detritus	
SILT	Clay or silt	< 0.1
S	sand	0.1 - 0.2
SG	small gravel	0.2 - 1.0
MG	medium gravel	1 - 2
LG	large gravel	2 - 3
SC	small cobble	3 - 6
MC	medium cobble	6 - 9
LC	large cobble	9 - 12
SB	small boulder	12 - 40
LB	large boulder	> 40
BRS	smooth bedrock	
BRR	rough bedrock	



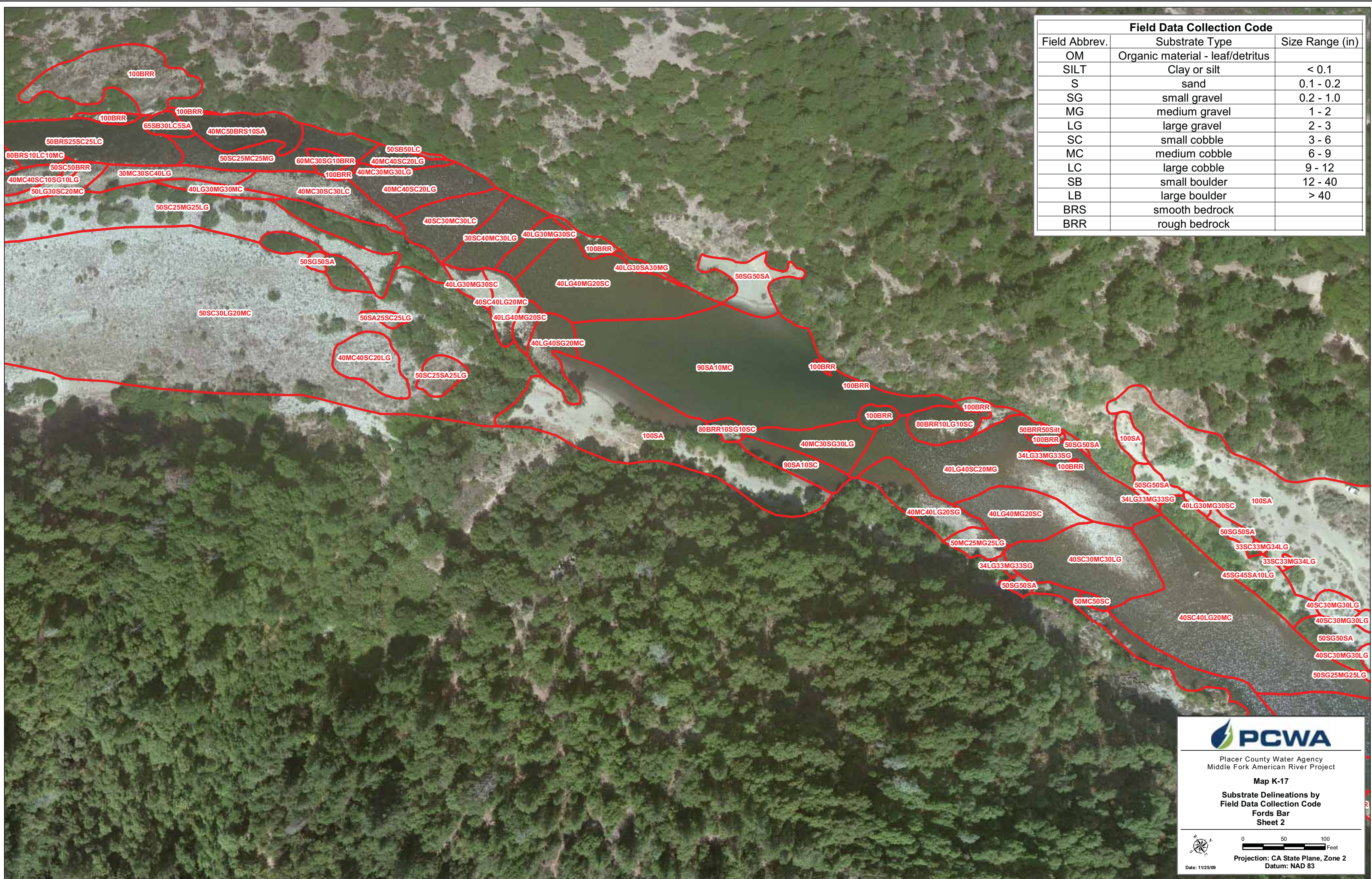
PCWA
 Placer County Water Agency
 Middle Fork American River Project

Map K-17
Substrate Delineations by
Field Data Collection Code
Fords Bar
Sheet 1

0 50 100 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83

Date: 11/25/09

Field Data Collection Code		
Field Abbrev.	Substrate Type	Size Range (in)
OM	Organic material - leaf/detritus	
SILT	Clay or silt	< 0.1
S	sand	0.1 - 0.2
SG	small gravel	0.2 - 1.0
MG	medium gravel	1 - 2
LG	large gravel	2 - 3
SC	small cobble	3 - 6
MC	medium cobble	6 - 9
LC	large cobble	9 - 12
SB	small boulder	12 - 40
LB	large boulder	> 40
BRS	smooth bedrock	
BRR	rough bedrock	



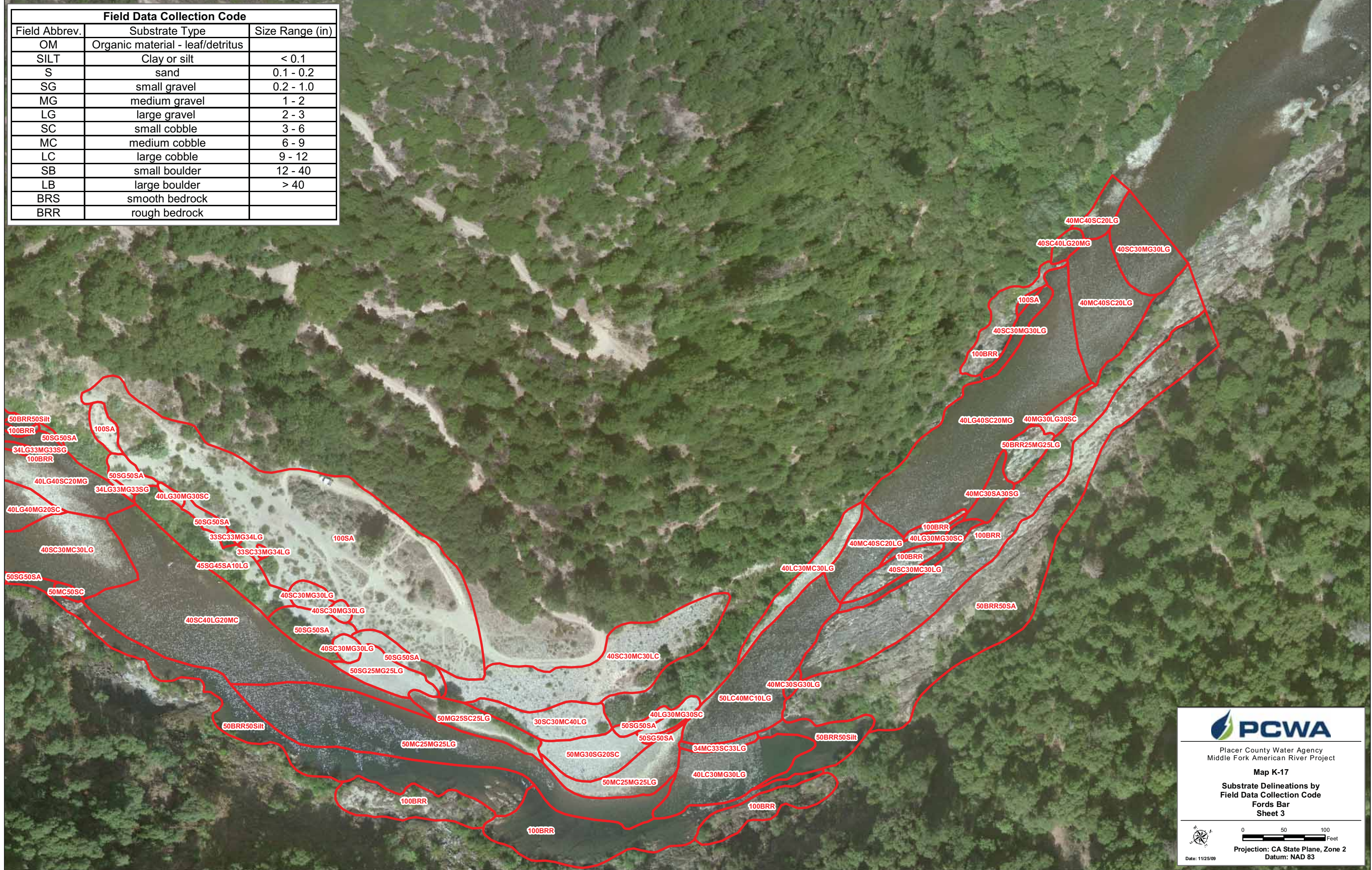
PCWA
 Placer County Water Agency
 Middle Fork American River Project

Map K-17
 Substrate Delineations by
 Field Data Collection Code
 Fords Bar
 Sheet 2

0 50 100 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83

Date: 11/25/09

Field Data Collection Code		
Field Abbrev.	Substrate Type	Size Range (in)
OM	Organic material - leaf/detritus	
SILT	Clay or silt	< 0.1
S	sand	0.1 - 0.2
SG	small gravel	0.2 - 1.0
MG	medium gravel	1 - 2
LG	large gravel	2 - 3
SC	small cobble	3 - 6
MC	medium cobble	6 - 9
LC	large cobble	9 - 12
SB	small boulder	12 - 40
LB	large boulder	> 40
BRS	smooth bedrock	
BRR	rough bedrock	



PCWA
Placer County Water Agency
Middle Fork American River Project

Map K-17
Substrate Delineations by
Field Data Collection Code
Fords Bar
Sheet 3

0 50 100
Feet

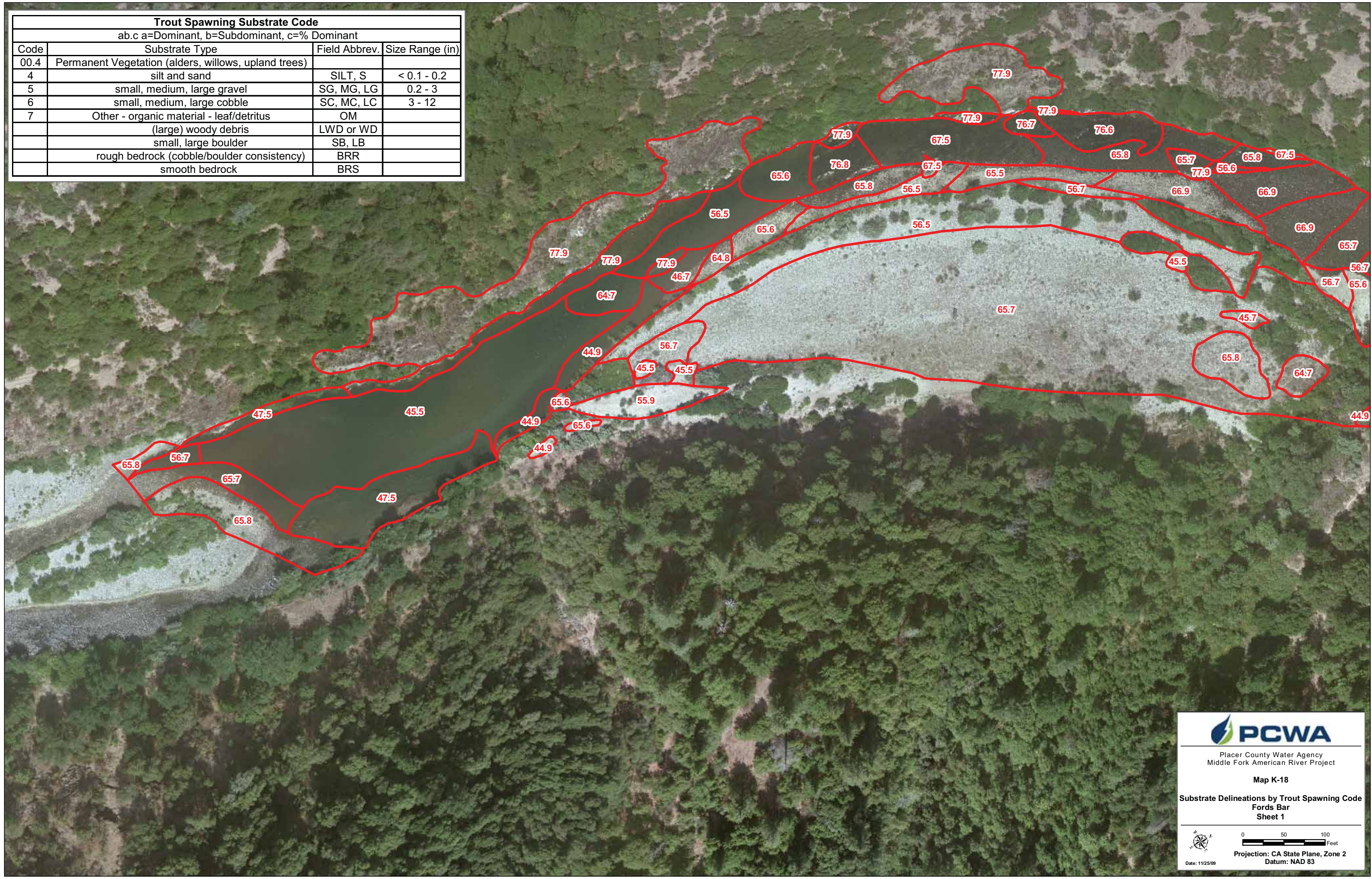
Projection: CA State Plane, Zone 2
Datum: NAD 83

Date: 11/25/09

Trout Spawning Substrate Code

ab.c a=Dominant, b=Subdominant, c=% Dominant

Code	Substrate Type	Field Abbrev.	Size Range (in)
00.4	Permanent Vegetation (alders, willows, upland trees)		
4	silt and sand	SILT, S	< 0.1 - 0.2
5	small, medium, large gravel	SG, MG, LG	0.2 - 3
6	small, medium, large cobble	SC, MC, LC	3 - 12
7	Other - organic material - leaf/detritus	OM	
	(large) woody debris	LWD or WD	
	small, large boulder	SB, LB	
	rough bedrock (cobble/boulder consistency)	BRR	
	smooth bedrock	BRS	



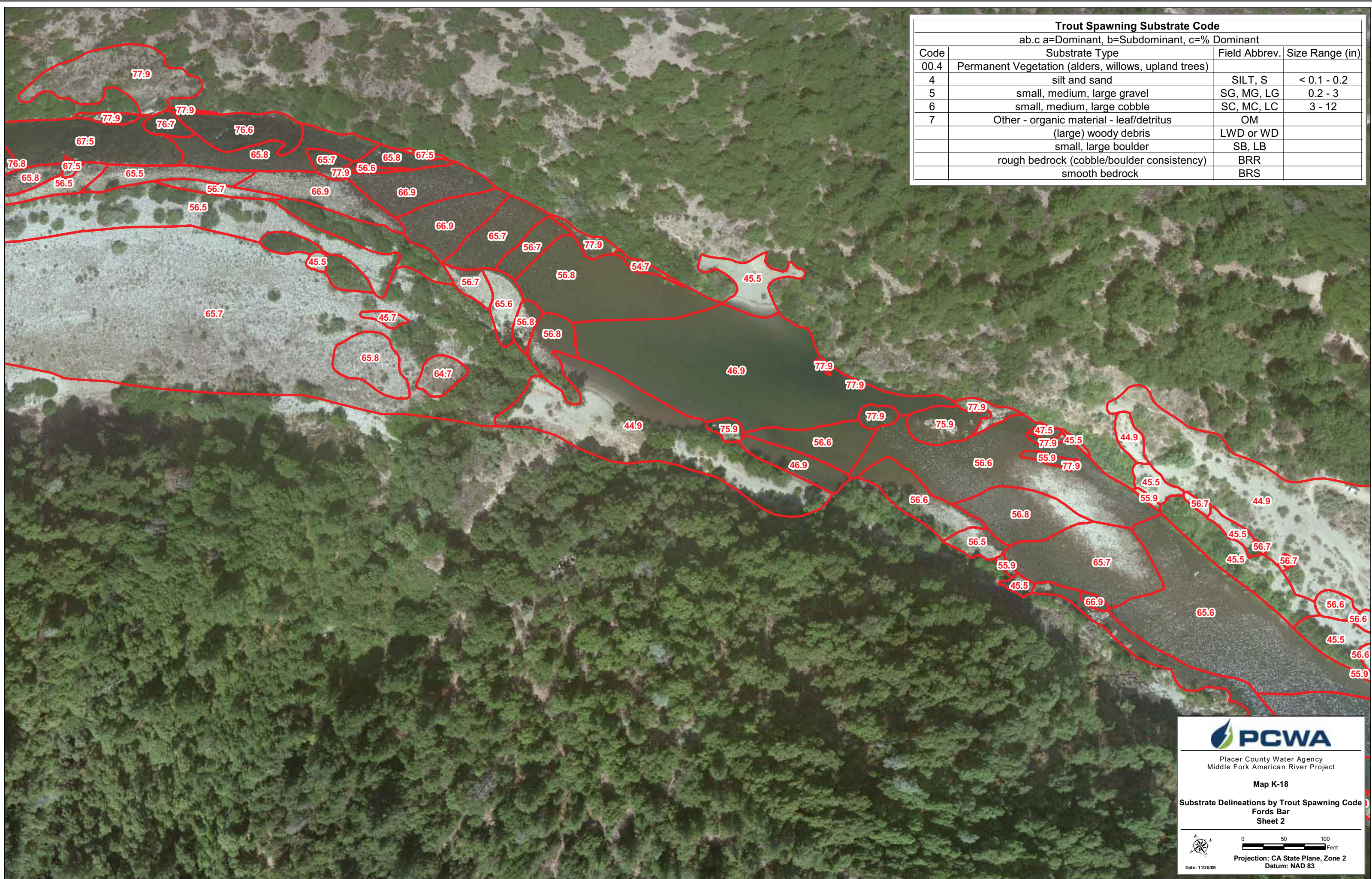
PCWA
 Placer County Water Agency
 Middle Fork American River Project

Map K-18
Substrate Delineations by Trout Spawning Code
Fords Bar
Sheet 1


0 50 100 Feet

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

Date: 11/25/09



Trout Spawning Substrate Code			
ab.c a=Dominant, b=Subdominant, c=% Dominant			
Code	Substrate Type	Field Abbrev.	Size Range (in)
00.4	Permanent Vegetation (alders, willows, upland trees)		
4	silt and sand	SILT, S	< 0.1 - 0.2
5	small, medium, large gravel	SG, MG, LG	0.2 - 3
6	small, medium, large cobble	SC, MC, LC	3 - 12
7	Other - organic material - leaf/detritus	OM	
	(large) woody debris	LWD or WD	
	small, large boulder	SB, LB	
	rough bedrock (cobble/boulder consistency)	BRR	
	smooth bedrock	BRS	



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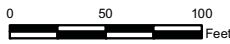
 Middle Fork American River Project

Map K-18

Substrate Delineations by Trout Spawning Code

Fords Bar

Sheet 2

 Projection: CA State Plane, Zone 2

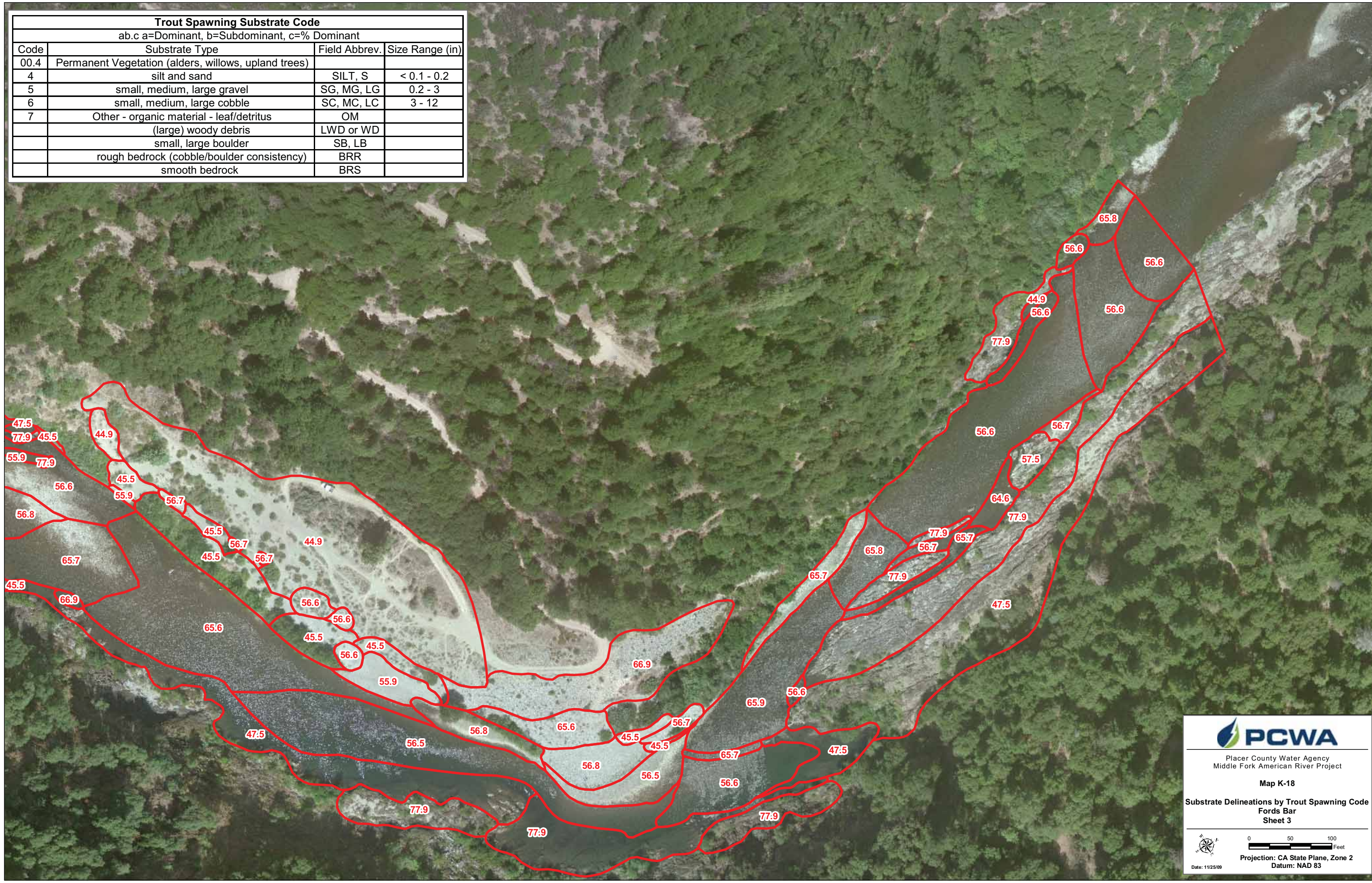
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 Date: 11/25/09

Trout Spawning Substrate Code

ab.c a=Dominant, b=Subdominant, c=% Dominant

Code	Substrate Type	Field Abbrev.	Size Range (in)
00.4	Permanent Vegetation (alders, willows, upland trees)		
4	silt and sand	SILT, S	< 0.1 - 0.2
5	small, medium, large gravel	SG, MG, LG	0.2 - 3
6	small, medium, large cobble	SC, MC, LC	3 - 12
7	Other - organic material - leaf/detritus	OM	
	(large) woody debris	LWD or WD	
	small, large boulder	SB, LB	
	rough bedrock (cobble/boulder consistency)	BRR	
	smooth bedrock	BRS	



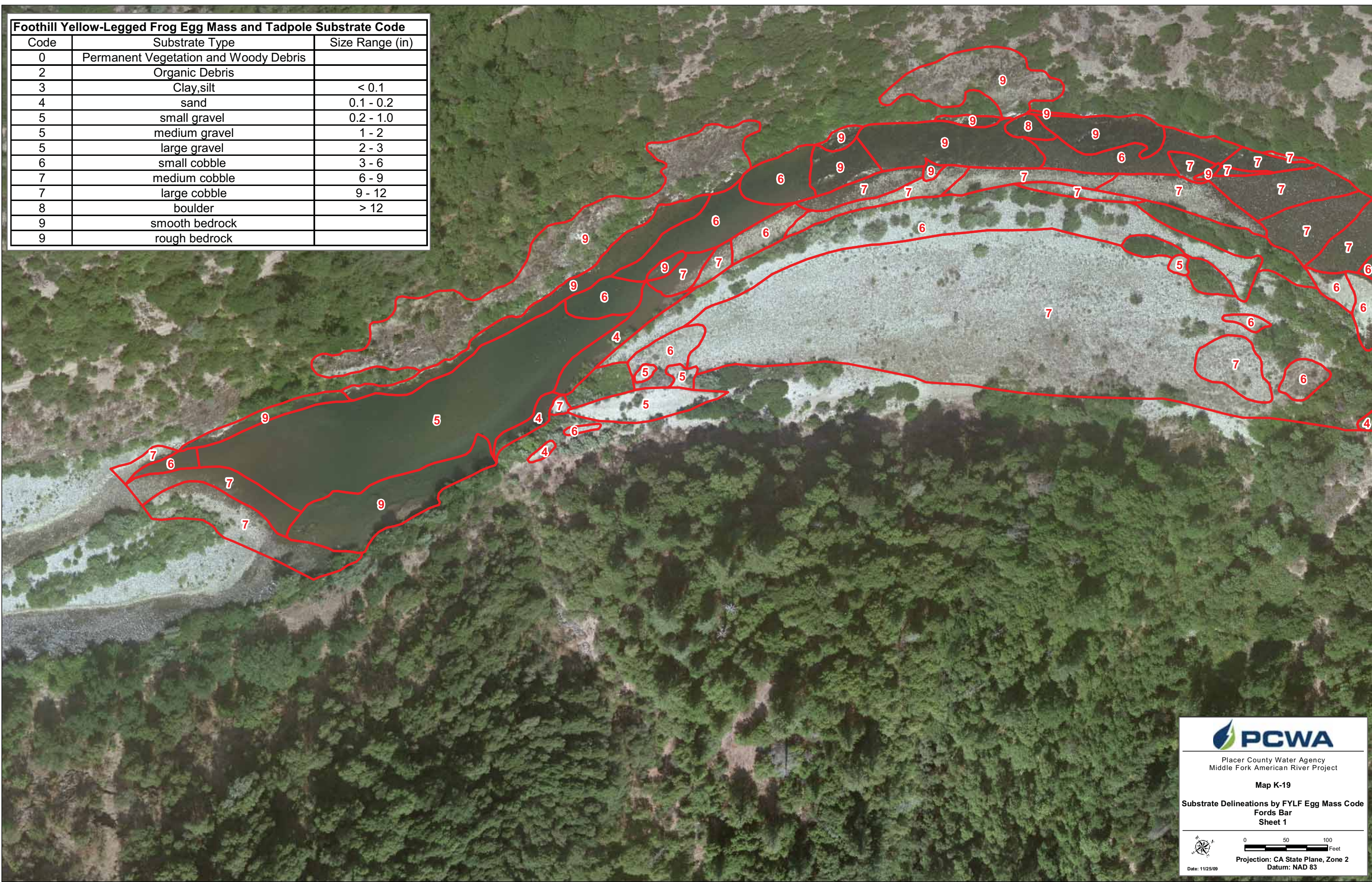
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Map K-18
Substrate Delineations by Trout Spawning Code
Fords Bar
Sheet 3

0 50 100 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83

Date: 11/25/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	



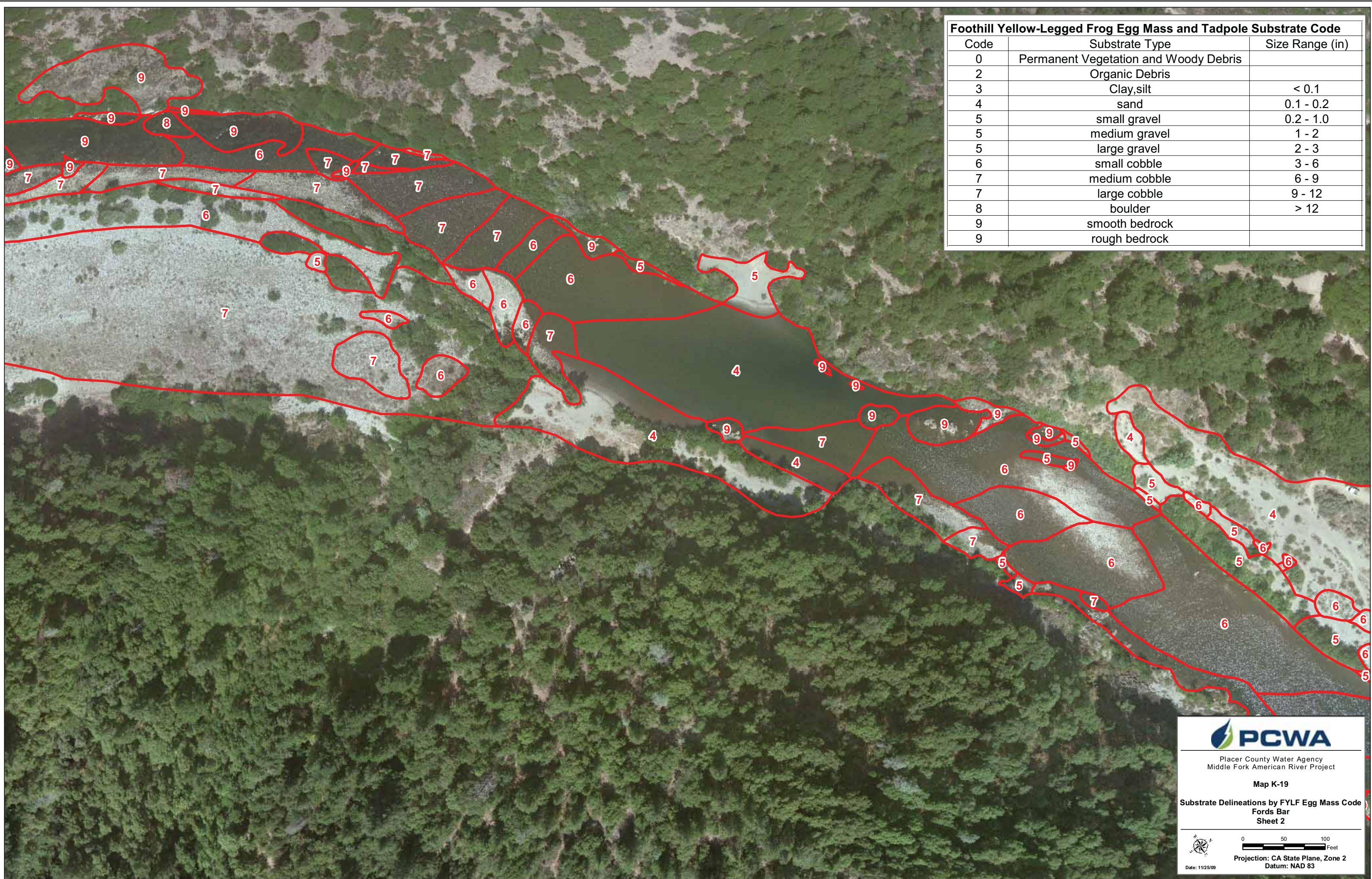
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Map K-19
Substrate Delineations by FYLF Egg Mass Code
Fords Bar
Sheet 1

0 50 100 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83

Date: 11/25/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	



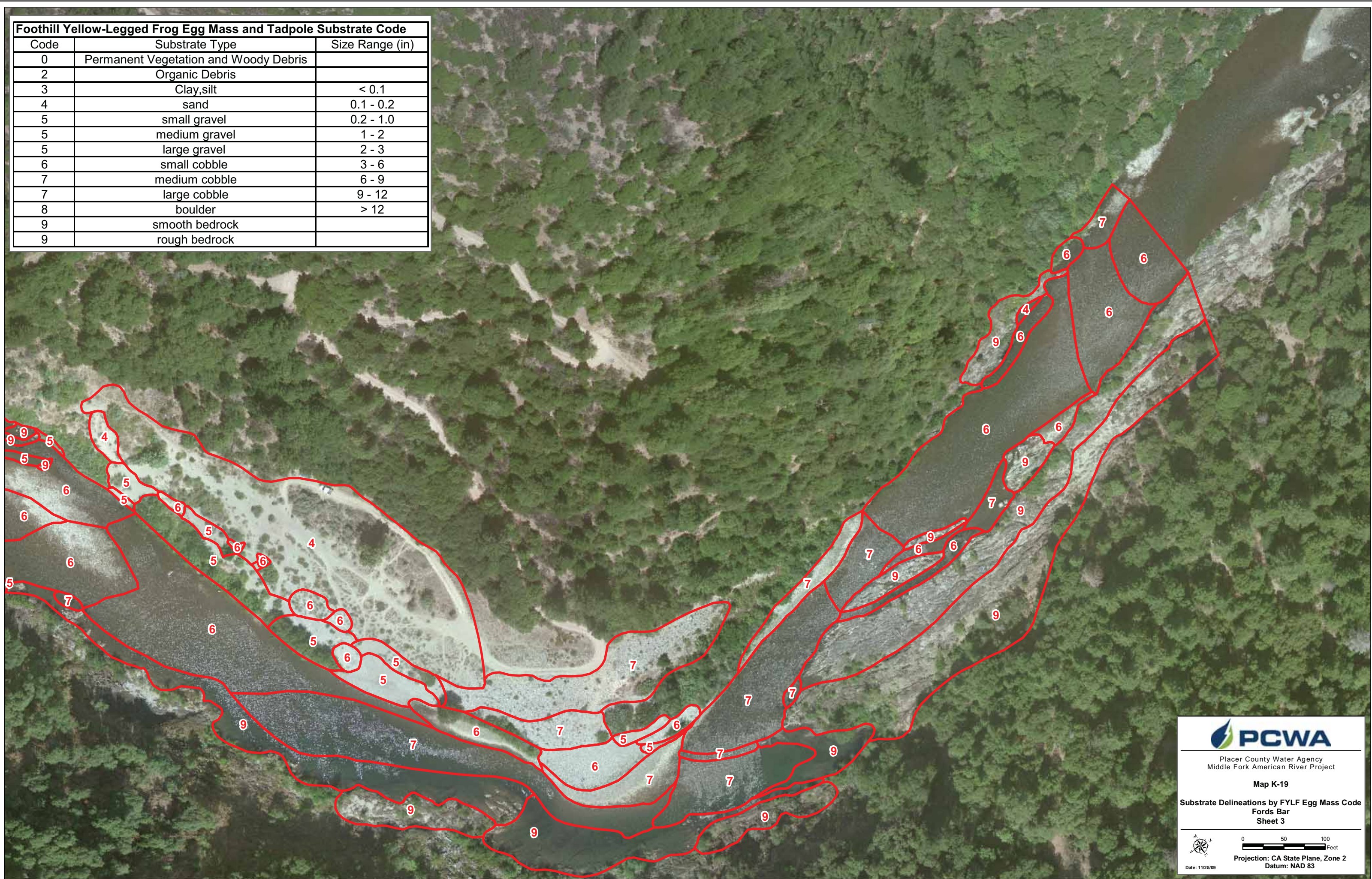
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Map K-19
 Substrate Delineations by FYLF Egg Mass Code
 Fords Bar
 Sheet 2

0 50 100 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83

Date: 11/25/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	



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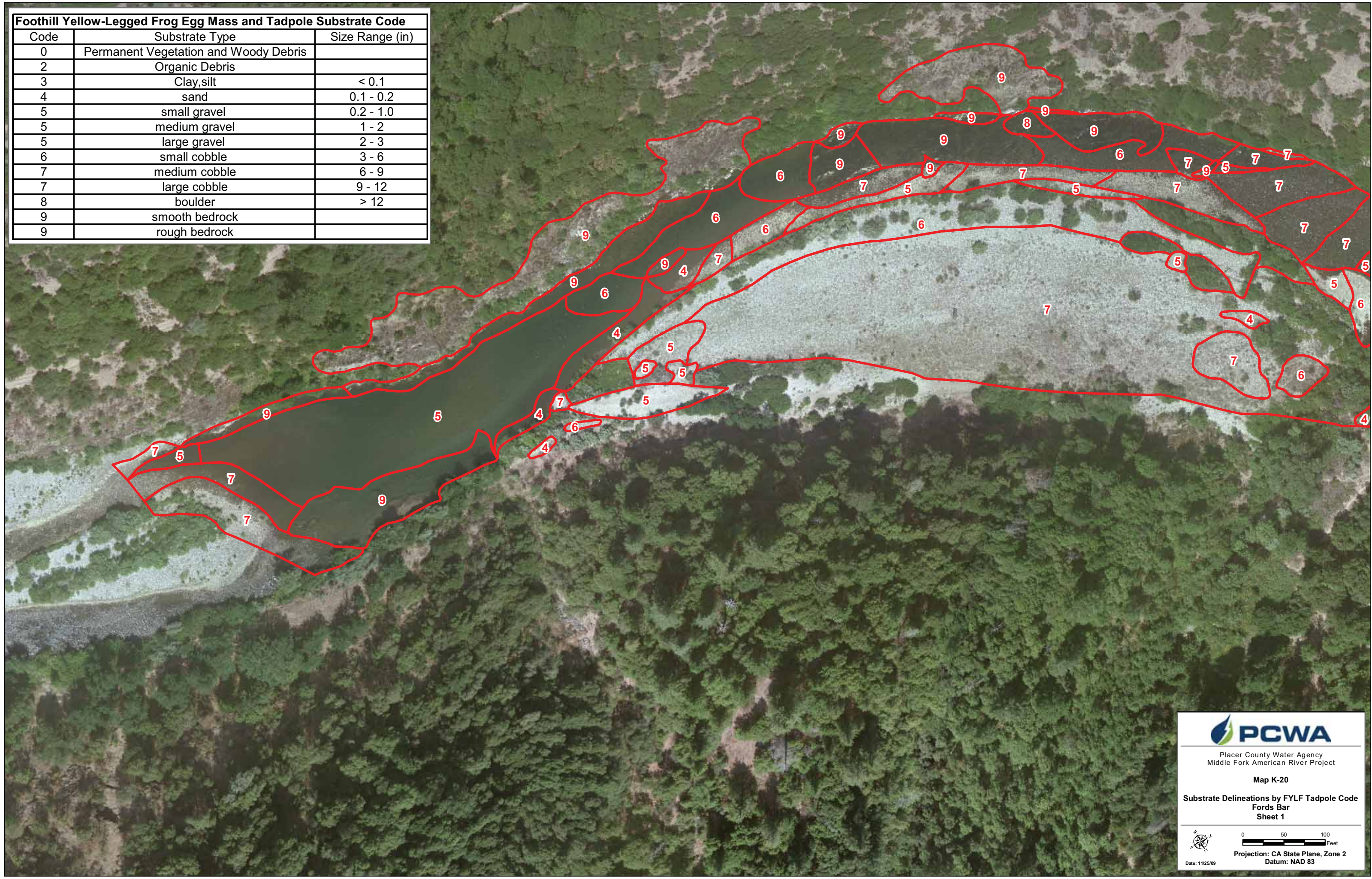
Map K-19
Substrate Delineations by FYLF Egg Mass Code
Fords Bar
Sheet 3


0 50 100
 Feet

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

Date: 11/25/09


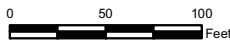
Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	





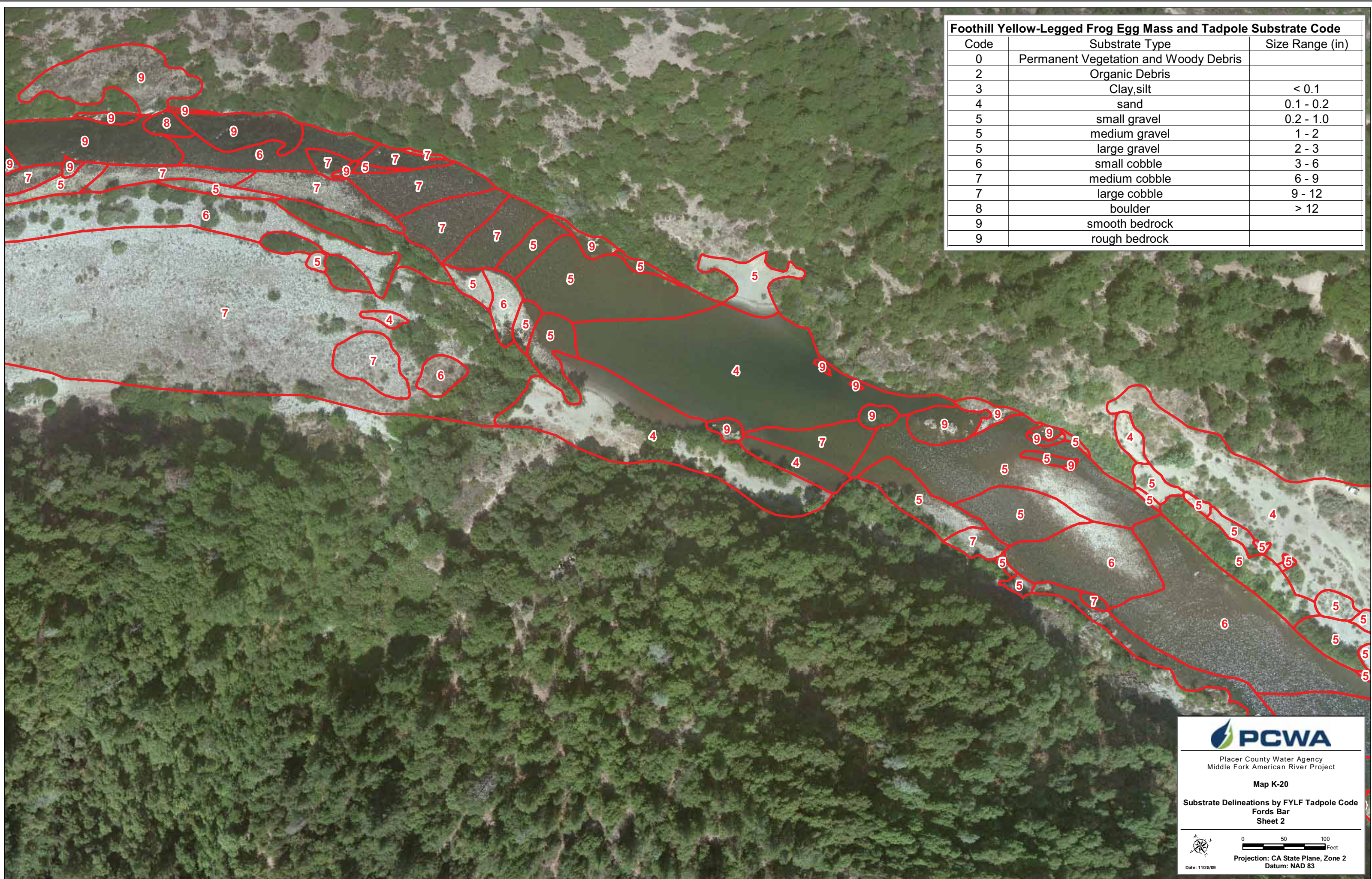
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Map K-20
Substrate Delineations by FYLF Tadpole Code
Fords Bar
Sheet 1

 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/25/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	



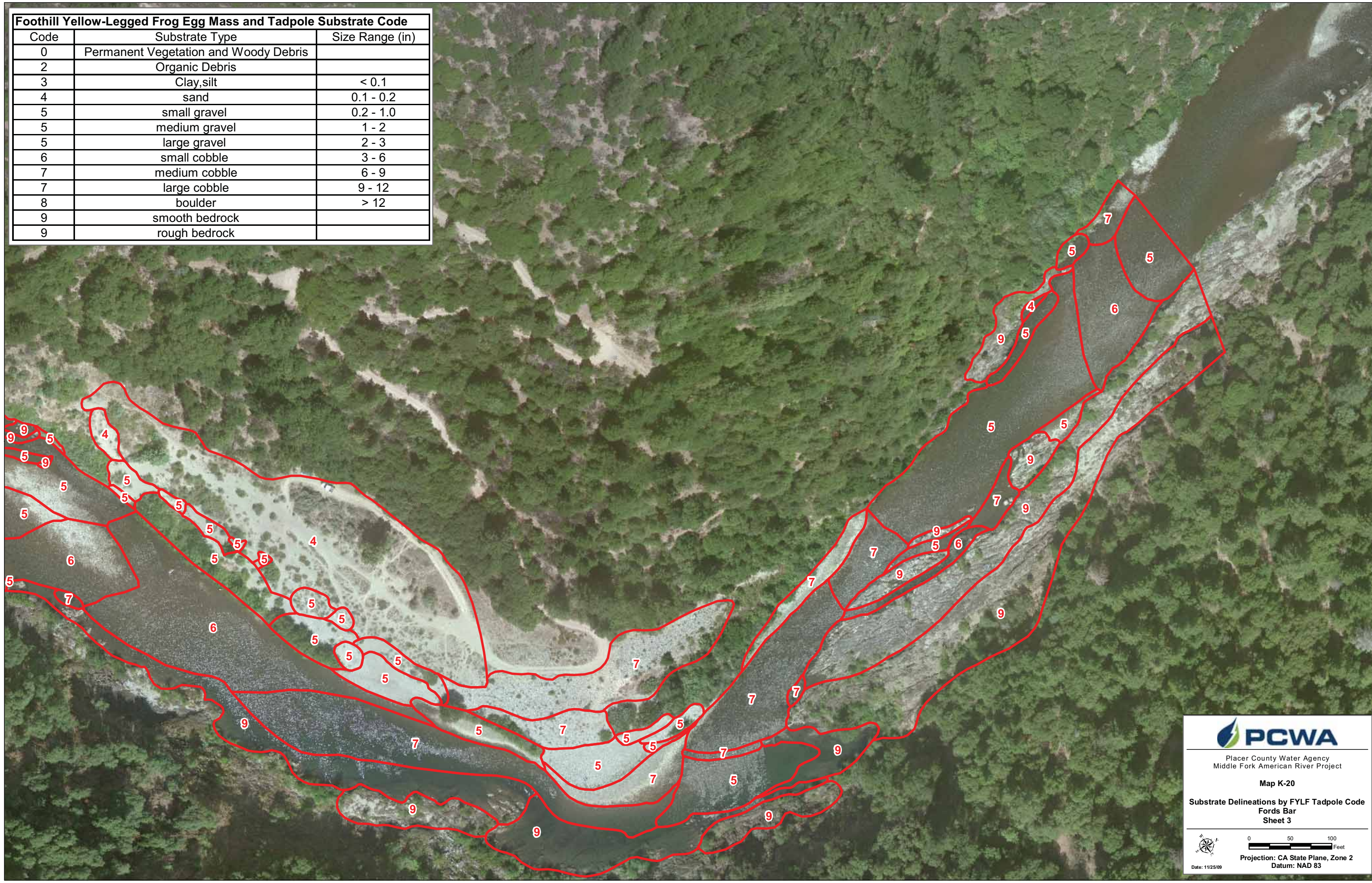
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Map K-20
 Substrate Delineations by FYLF Tadpole Code
 Fords Bar
 Sheet 2

0 50 100 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83

Date: 11/25/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay, silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	



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Map K-20
Substrate Delineations by FYLF Tadpole Code
Fords Bar
Sheet 3

0 50 100 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83

Date: 11/25/09

Species Codes

- | | |
|--|-----------------------|
| Common Riparian Species: | Other Species: |
| SALIX: Willows | ACMA: Big-leaf Maple |
| ALRH: White Alder | ABIES: Fir |
| POFR: Fremont's Cottonwood | CADE: Incense Cedar |
| Non-native Species: | QUERCUS: Oak |
| ROPS: Black Locust | FRLA: Oregon Ash |
| AIAL: Tree of heaven | PINUS: Pine |
| FIG: Edible Fig | REDBUD: Redbud |
| Other Cover: | |
| LWD: Large Woody Debris | |
| HERB: herbaceous species only | |
| OTHER: blackberry, CA wild grape, grasses, herbs | |



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Map K-21
Riparian Vegetation Delineations by Dominance
Fords Bar
Sheet 1

0 50 100 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83

Date: 11/25/09

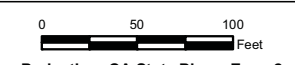
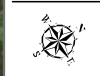
Species Codes

- | | |
|--|-----------------------|
| Common Riparian Species: | Other Species: |
| SALIX: Willows | ACMA: Big-leaf Maple |
| ALRH: White Alder | ABIES: Fir |
| POFR: Fremont's Cottonwood | CADE: Incense Cedar |
| Non-native Species: | QUERCUS: Oak |
| ROPS: Black Locust | FRLA: Oregon Ash |
| ALAL: Tree of heaven | PINUS: Pine |
| FIG: Edible Fig | REDBUD: Redbud |
| Other Cover: | |
| LWD: Large Woody Debris | |
| HERB: herbaceous species only | |
| OTHER: blackberry, CA wild grape, grasses, herbs | |



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Map K-21
Riparian Vegetation Delineations by Dominance
Fords Bar
Sheet 2

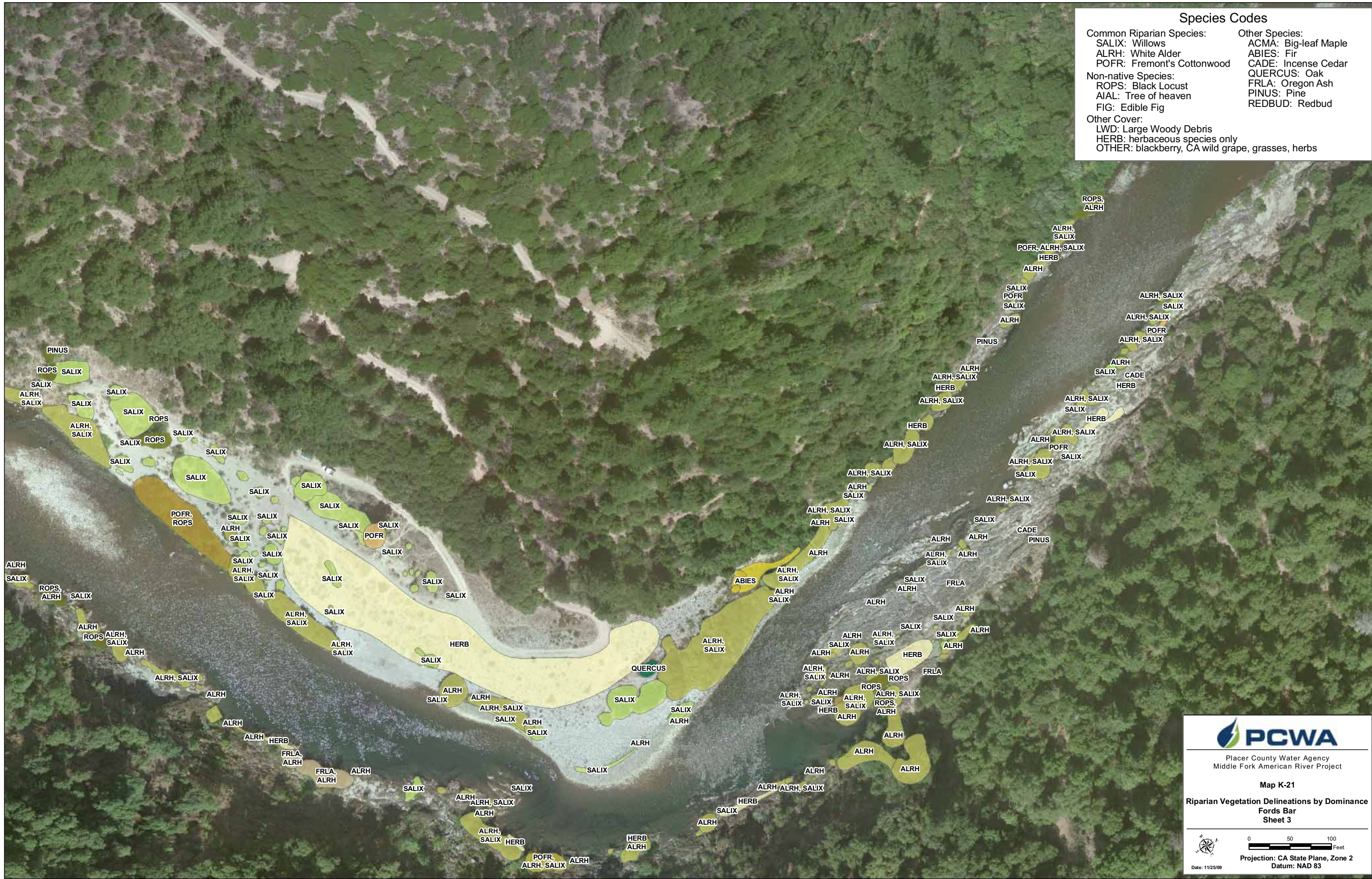


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Date: 11/25/09

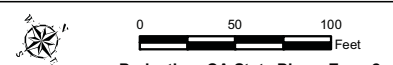
Species Codes

- | | |
|--|----------------------|
| Common Riparian Species: | Other Species: |
| SALIX: Willows | ACMA: Big-leaf Maple |
| ALRH: White Alder | ABIES: Fir |
| POFR: Fremont's Cottonwood | CADE: Incense Cedar |
| Non-native Species: | QUERCUS: Oak |
| ROPS: Black Locust | FRLA: Oregon Ash |
| AIAL: Tree of heaven | PINUS: Pine |
| FIG: Edible Fig | REDBUD: Redbud |
| Other Cover: | |
| LWD: Large Woody Debris | |
| HERB: herbaceous species only | |
| OTHER: blackberry, CA wild grape, grasses, herbs | |



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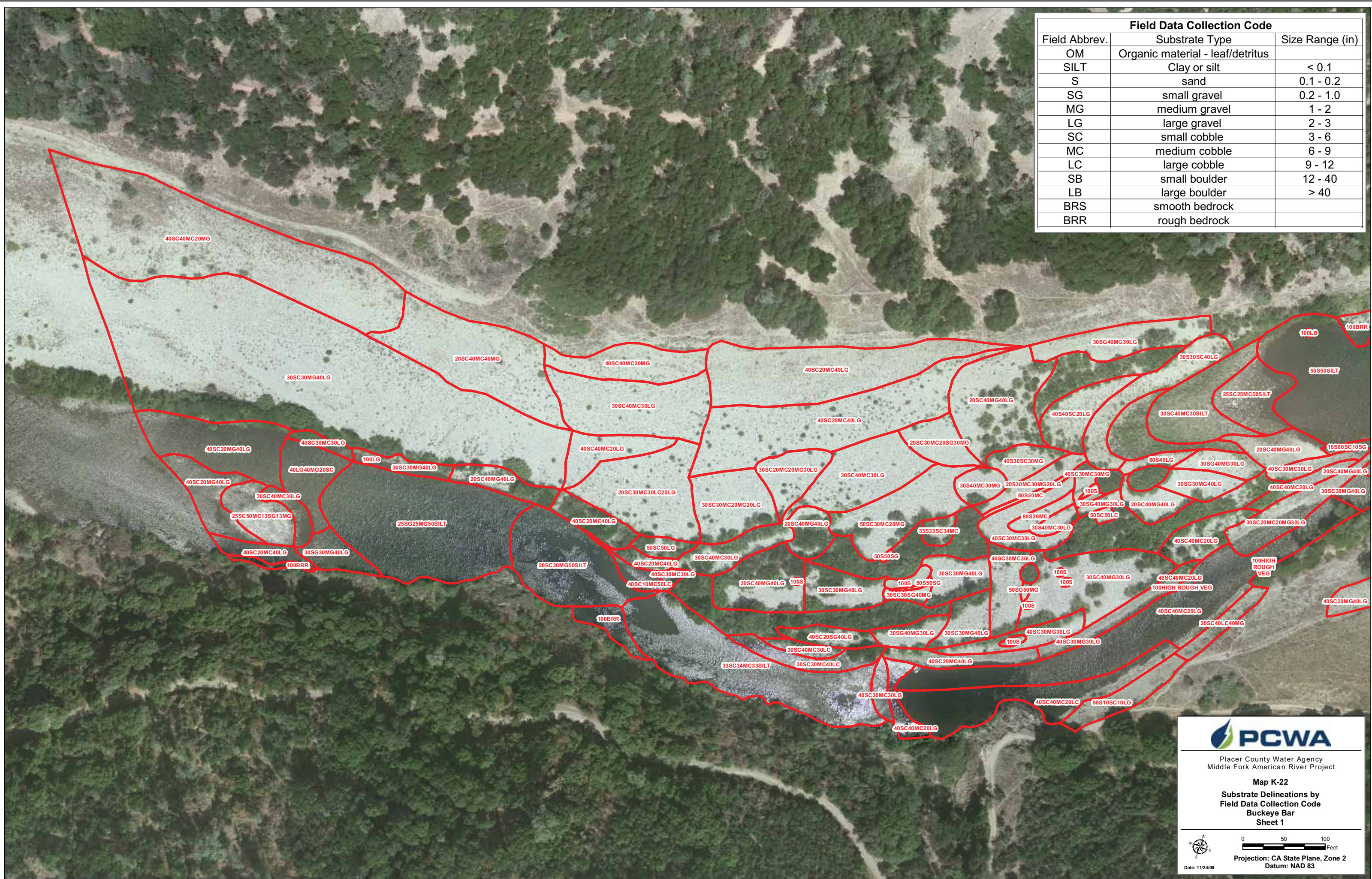
Map K-21
Riparian Vegetation Delineations by Dominance
Fords Bar
Sheet 3



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

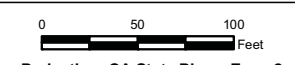
Date: 11/25/09

Field Data Collection Code		
Field Abbrev.	Substrate Type	Size Range (in)
OM	Organic material - leaf/detritus	
SILT	Clay or silt	< 0.1
S	sand	0.1 - 0.2
SG	small gravel	0.2 - 1.0
MG	medium gravel	1 - 2
LG	large gravel	2 - 3
SC	small cobble	3 - 6
MC	medium cobble	6 - 9
LC	large cobble	9 - 12
SB	small boulder	12 - 40
LB	large boulder	> 40
BRS	smooth bedrock	
BRR	rough bedrock	



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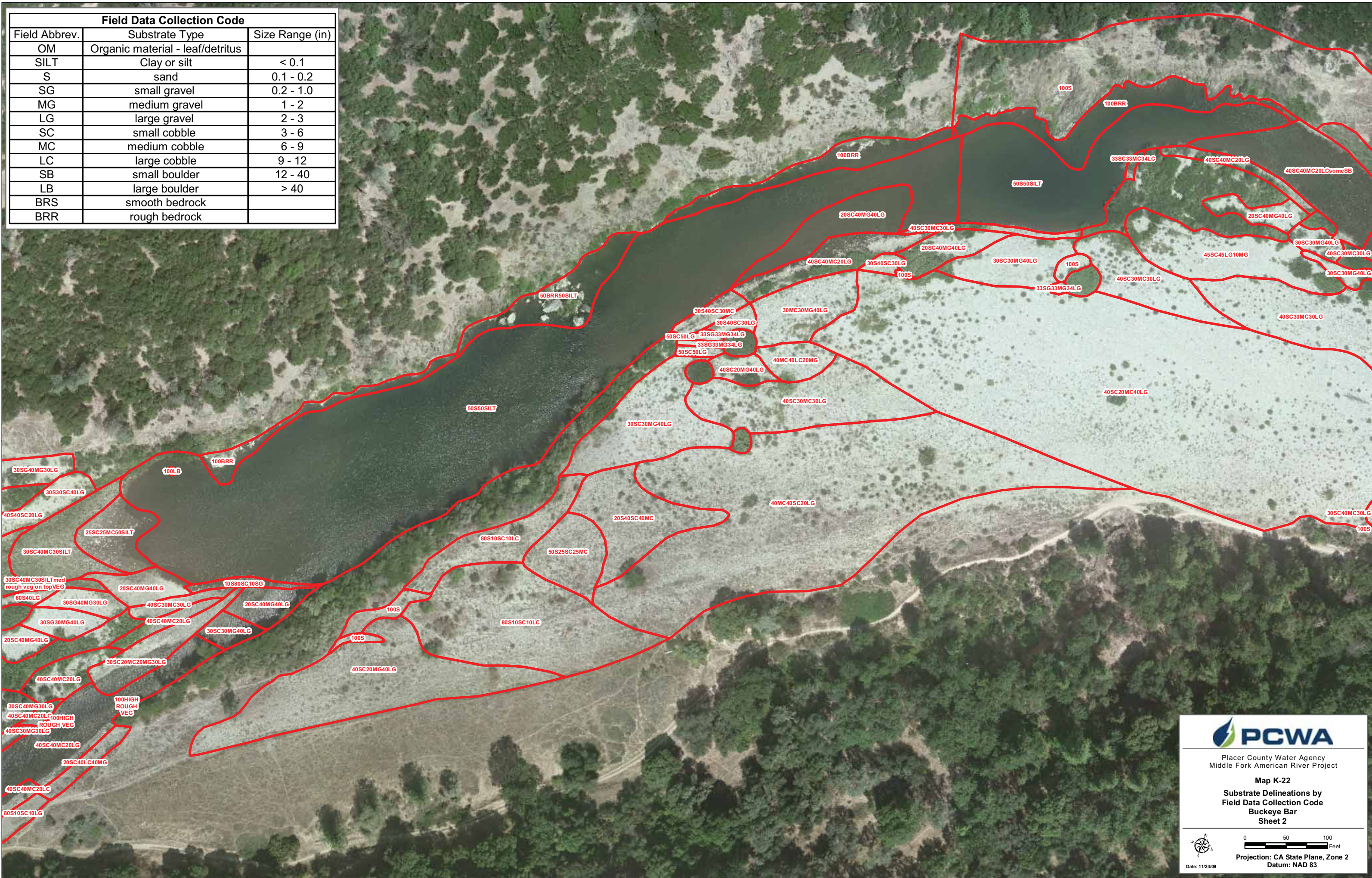
Map K-22
Substrate Delineations by
Field Data Collection Code
Buckeye Bar
Sheet 1





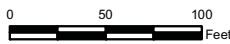
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Datum: NAD 83

Date: 11/24/09

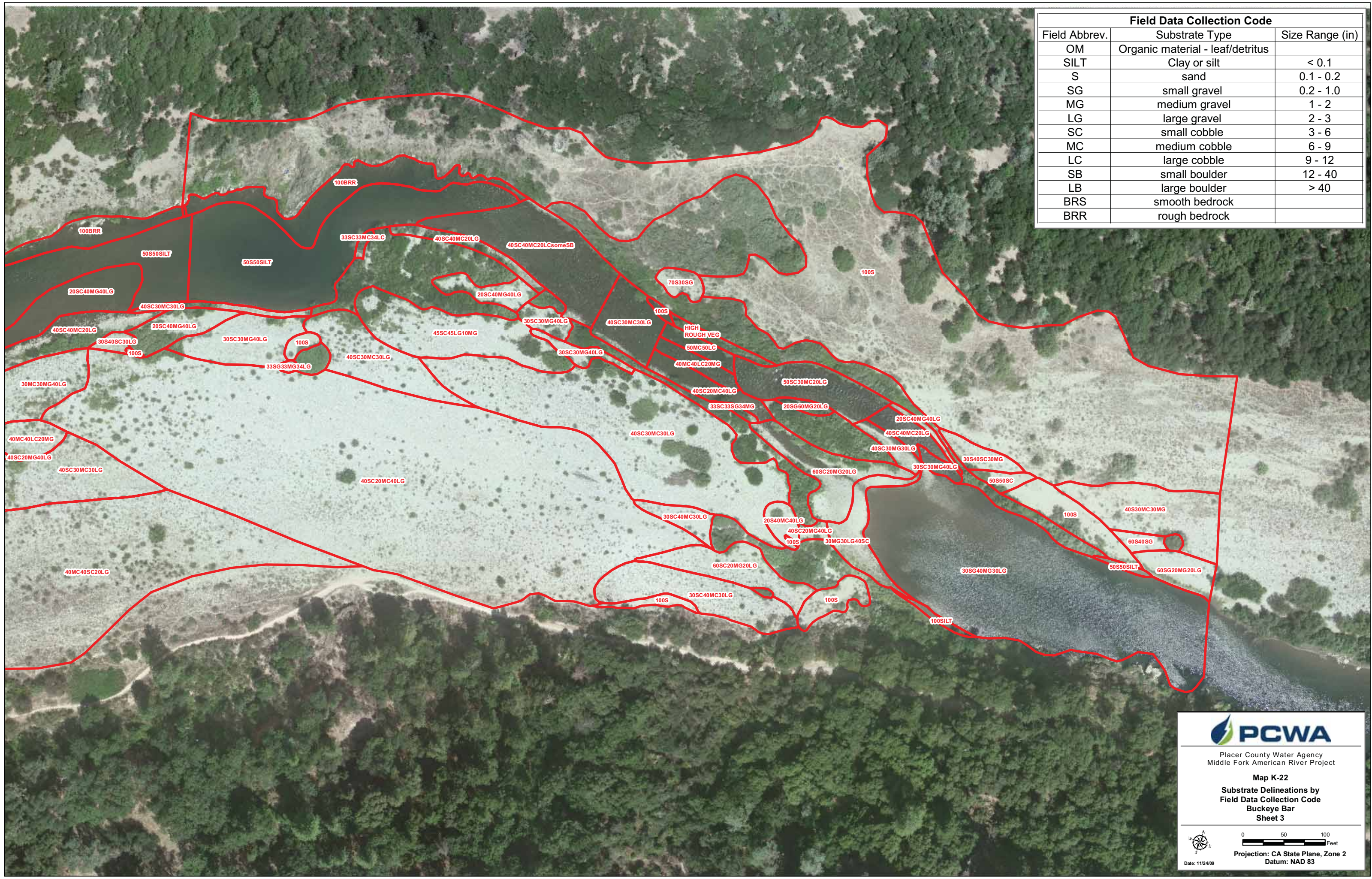
Field Data Collection Code		
Field Abbrev.	Substrate Type	Size Range (in)
OM	Organic material - leaf/detritus	
SILT	Clay or silt	< 0.1
S	sand	0.1 - 0.2
SG	small gravel	0.2 - 1.0
MG	medium gravel	1 - 2
LG	large gravel	2 - 3
SC	small cobble	3 - 6
MC	medium cobble	6 - 9
LC	large cobble	9 - 12
SB	small boulder	12 - 40
LB	large boulder	> 40
BRS	smooth bedrock	
BRR	rough bedrock	





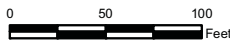

 Placer County Water Agency
 Middle Fork American River Project
Map K-22
Substrate Delineations by
Field Data Collection Code
Buckeye Bar
Sheet 2



 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

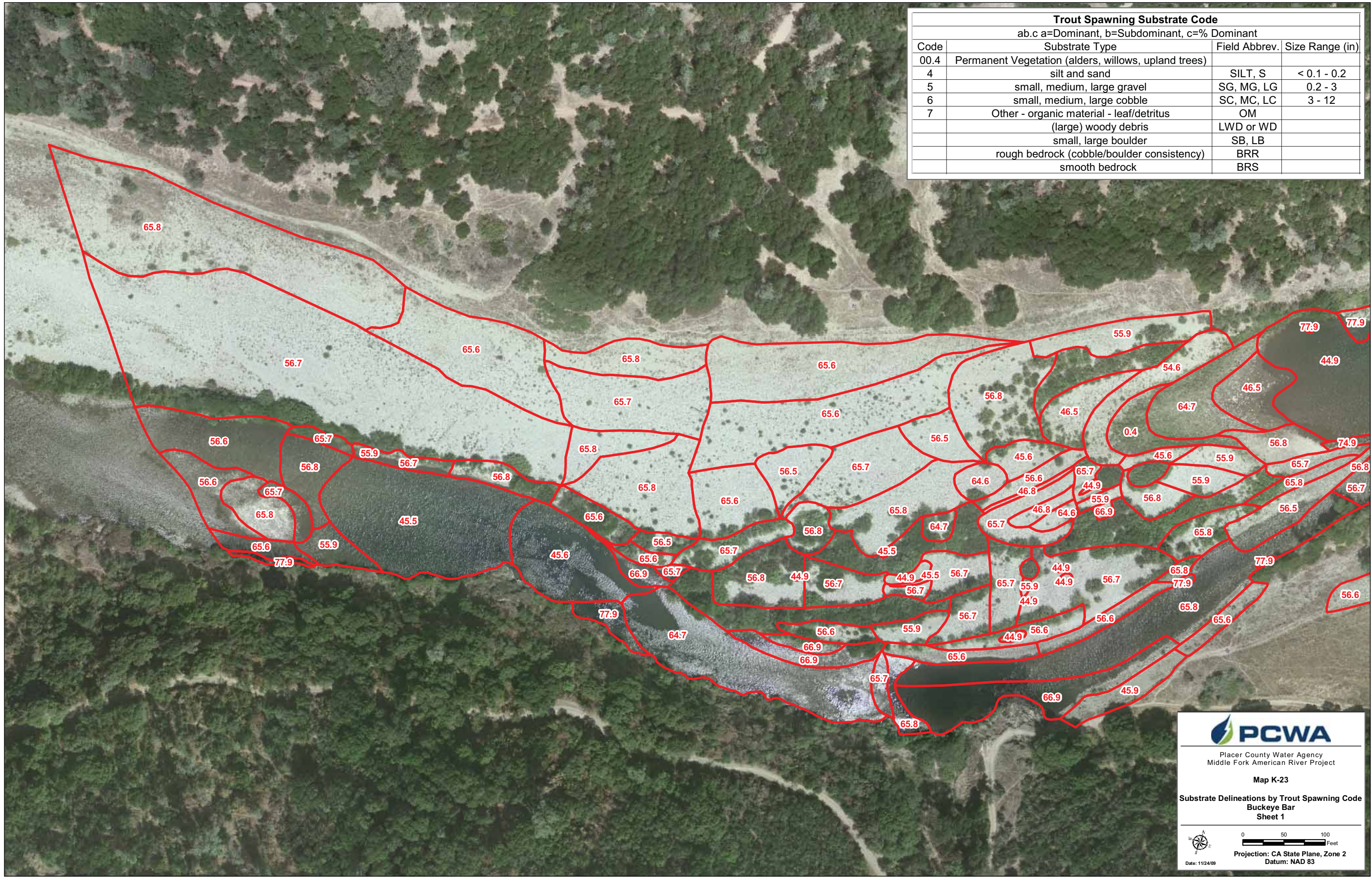
Field Data Collection Code		
Field Abbrev.	Substrate Type	Size Range (in)
OM	Organic material - leaf/detritus	
SILT	Clay or silt	< 0.1
S	sand	0.1 - 0.2
SG	small gravel	0.2 - 1.0
MG	medium gravel	1 - 2
LG	large gravel	2 - 3
SC	small cobble	3 - 6
MC	medium cobble	6 - 9
LC	large cobble	9 - 12
SB	small boulder	12 - 40
LB	large boulder	> 40
BRS	smooth bedrock	
BRR	rough bedrock	




 Placer County Water Agency
 Middle Fork American River Project
Map K-22
Substrate Delineations by
Field Data Collection Code
Buckeye Bar
Sheet 3



 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

Trout Spawning Substrate Code			
ab.c a=Dominant, b=Subdominant, c=% Dominant			
Code	Substrate Type	Field Abbrev.	Size Range (in)
00.4	Permanent Vegetation (alders, willows, upland trees)		
4	silt and sand	SILT, S	< 0.1 - 0.2
5	small, medium, large gravel	SG, MG, LG	0.2 - 3
6	small, medium, large cobble	SC, MC, LC	3 - 12
7	Other - organic material - leaf/detritus	OM	
	(large) woody debris	LWD or WD	
	small, large boulder	SB, LB	
	rough bedrock (cobble/boulder consistency)	BRR	
	smooth bedrock	BRS	



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Map K-23
Substrate Delineations by Trout Spawning Code
Buckeye Bar
Sheet 1

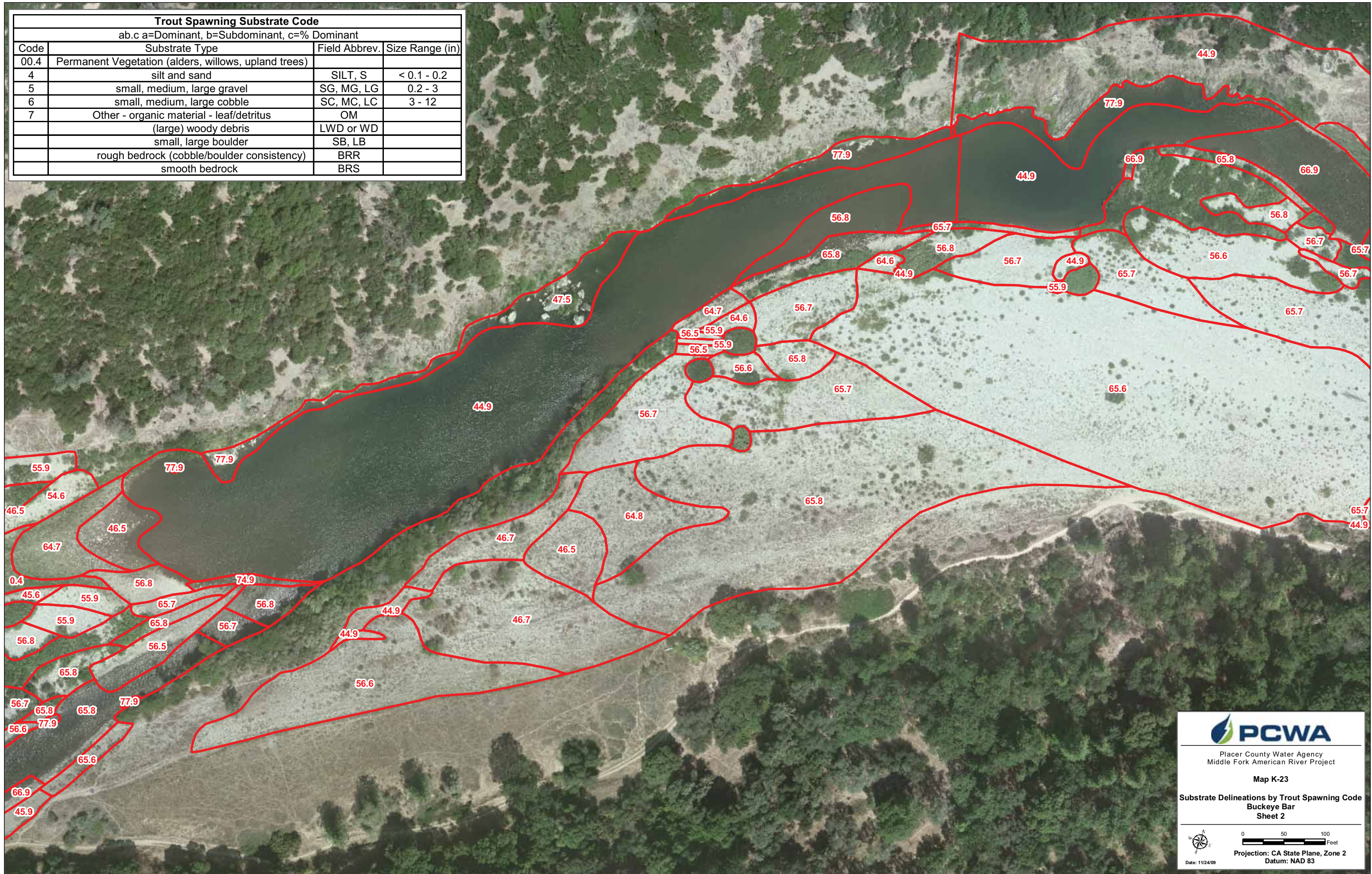
0 50 100 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83

Date: 11/24/09

Trout Spawning Substrate Code

ab.c a=Dominant, b=Subdominant, c=% Dominant

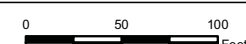
Code	Substrate Type	Field Abbrev.	Size Range (in)
00.4	Permanent Vegetation (alders, willows, upland trees)		
4	silt and sand	SILT, S	< 0.1 - 0.2
5	small, medium, large gravel	SG, MG, LG	0.2 - 3
6	small, medium, large cobble	SC, MC, LC	3 - 12
7	Other - organic material - leaf/detritus	OM	
	(large) woody debris	LWD or WD	
	small, large boulder	SB, LB	
	rough bedrock (cobble/boulder consistency)	BRR	
	smooth bedrock	BRS	



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Map K-23

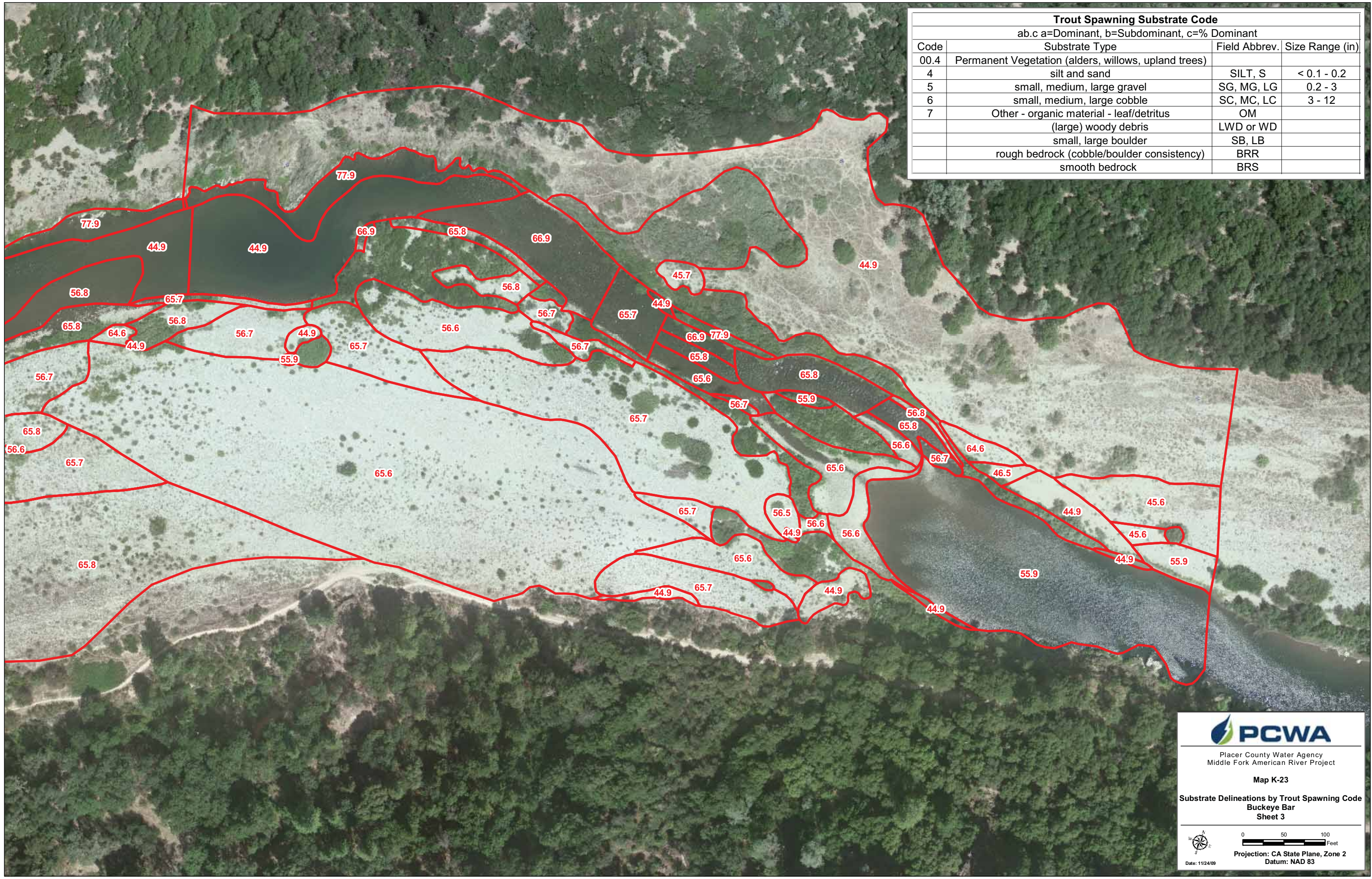
Substrate Delineations by Trout Spawning Code
Buckeye Bar
Sheet 2





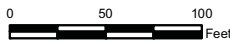
Projection: CA State Plane, Zone 2
Datum: NAD 83

Date: 11/24/09

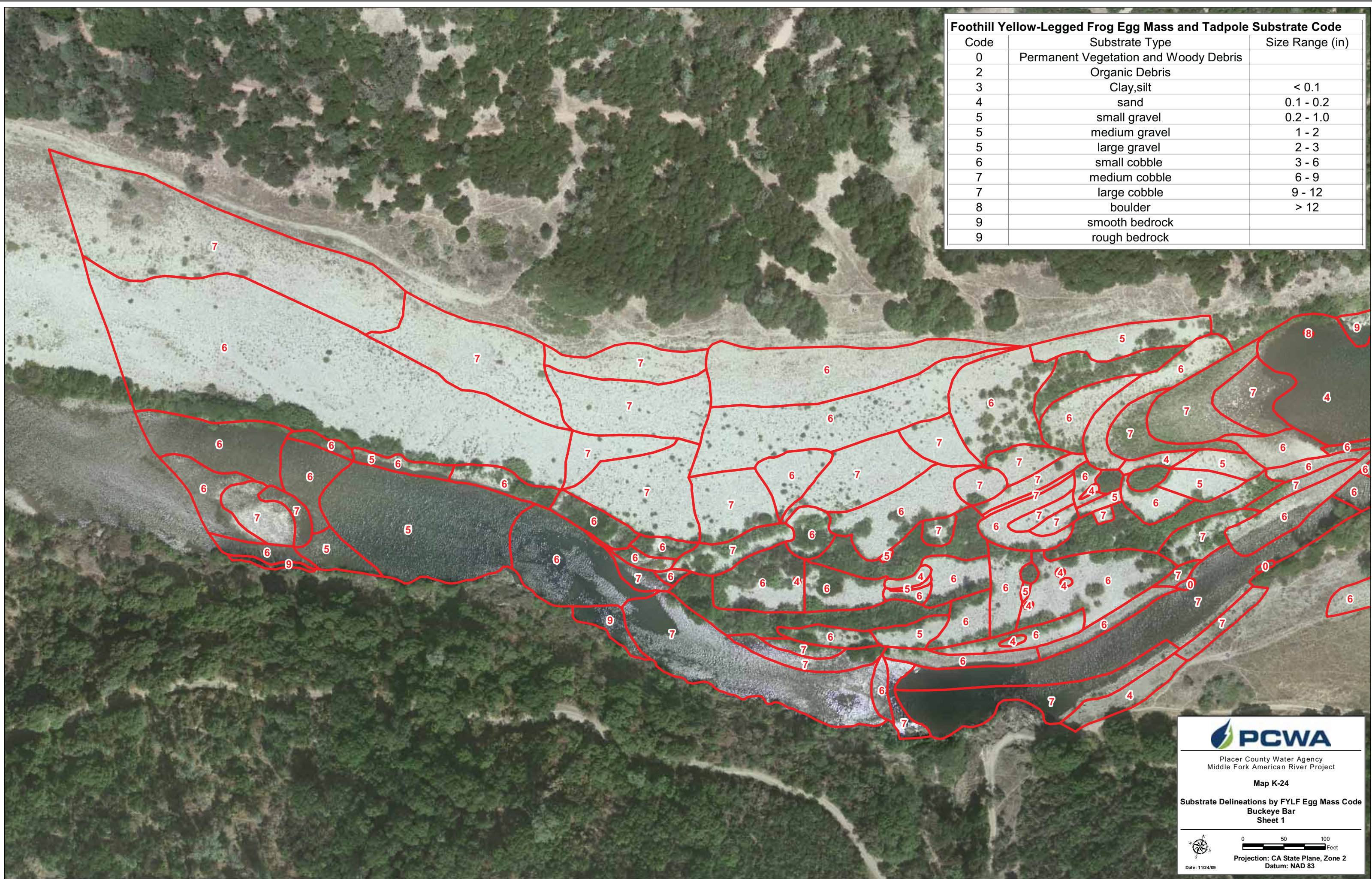
Trout Spawning Substrate Code			
ab.c a=Dominant, b=Subdominant, c=% Dominant			
Code	Substrate Type	Field Abbrev.	Size Range (in)
00.4	Permanent Vegetation (alders, willows, upland trees)		
4	silt and sand	SILT, S	< 0.1 - 0.2
5	small, medium, large gravel	SG, MG, LG	0.2 - 3
6	small, medium, large cobble	SC, MC, LC	3 - 12
7	Other - organic material - leaf/detritus	OM	
	(large) woody debris	LWD or WD	
	small, large boulder	SB, LB	
	rough bedrock (cobble/boulder consistency)	BRR	
	smooth bedrock	BRS	




 Placer County Water Agency
 Middle Fork American River Project
Map K-23
Substrate Delineations by Trout Spawning Code
Buckeye Bar
Sheet 3



 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	



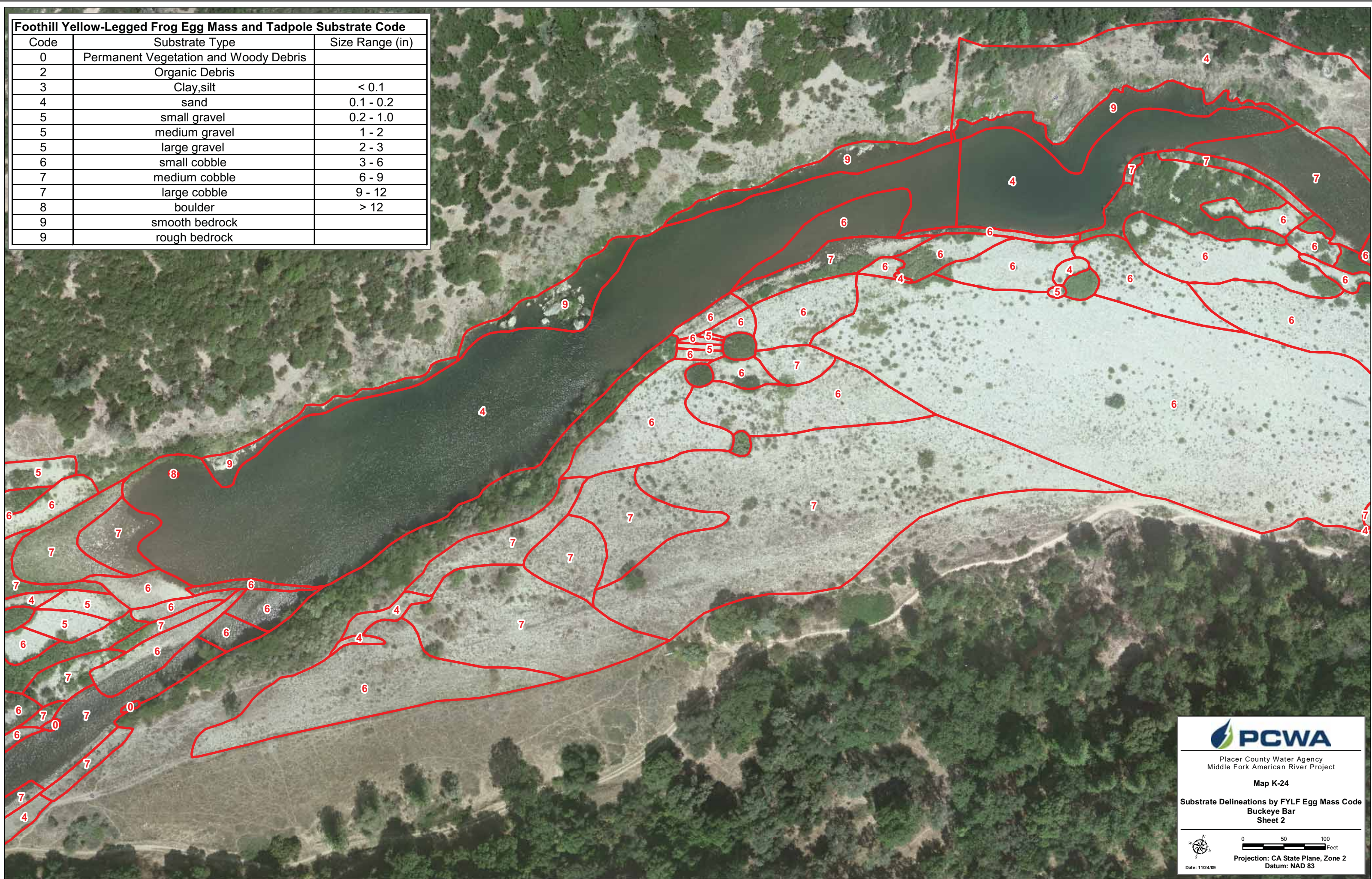
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Map K-24
 Substrate Delineations by FYLF Egg Mass Code
 Buckeye Bar
 Sheet 1

0 50 100 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83

Date: 11/24/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	

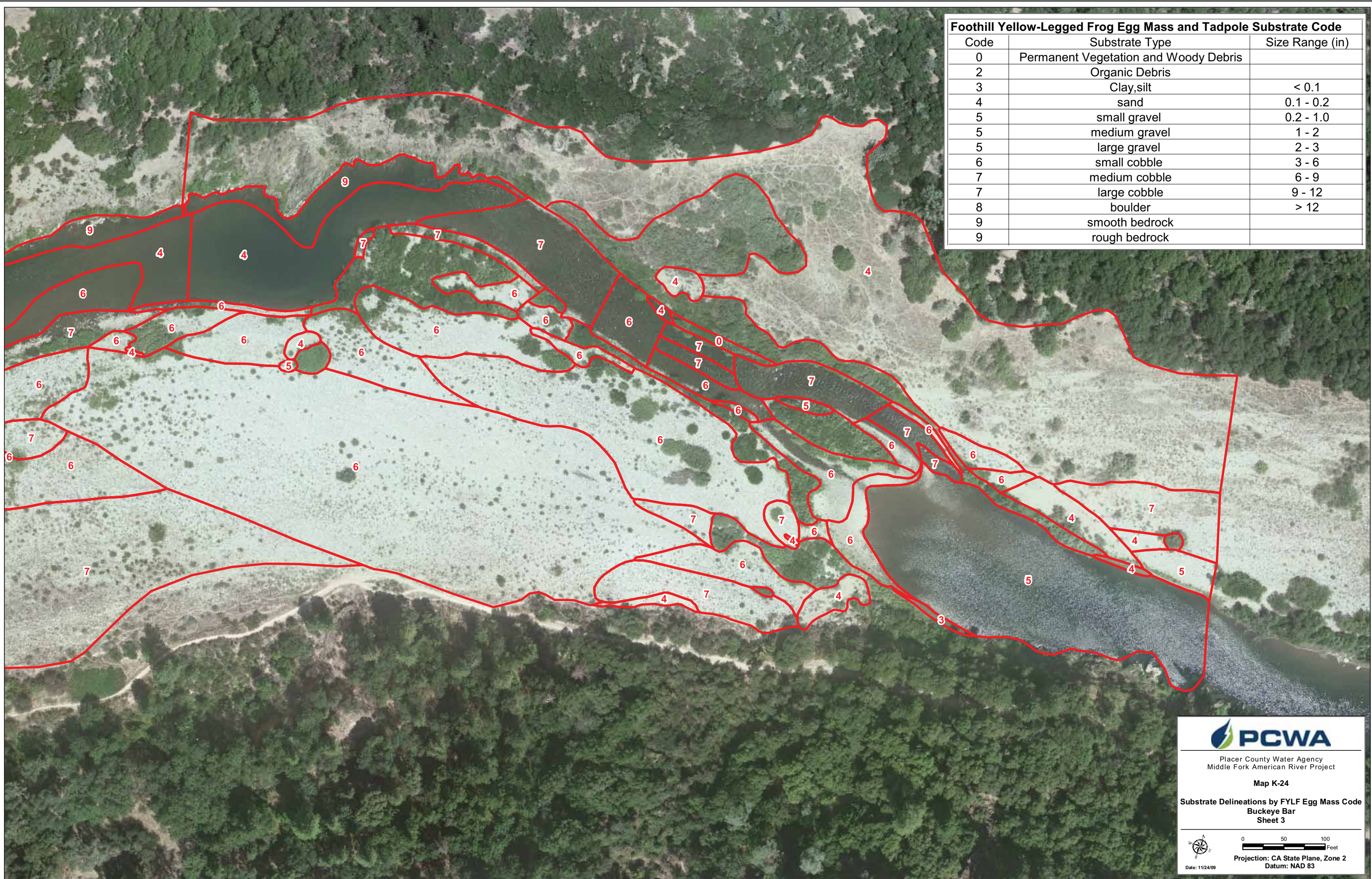



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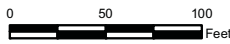
Map K-24
Substrate Delineations by FYLF Egg Mass Code
Buckeye Bar
Sheet 2

0 50 100 Feet
Projection: CA State Plane, Zone 2
Datum: NAD 83
Date: 11/24/09

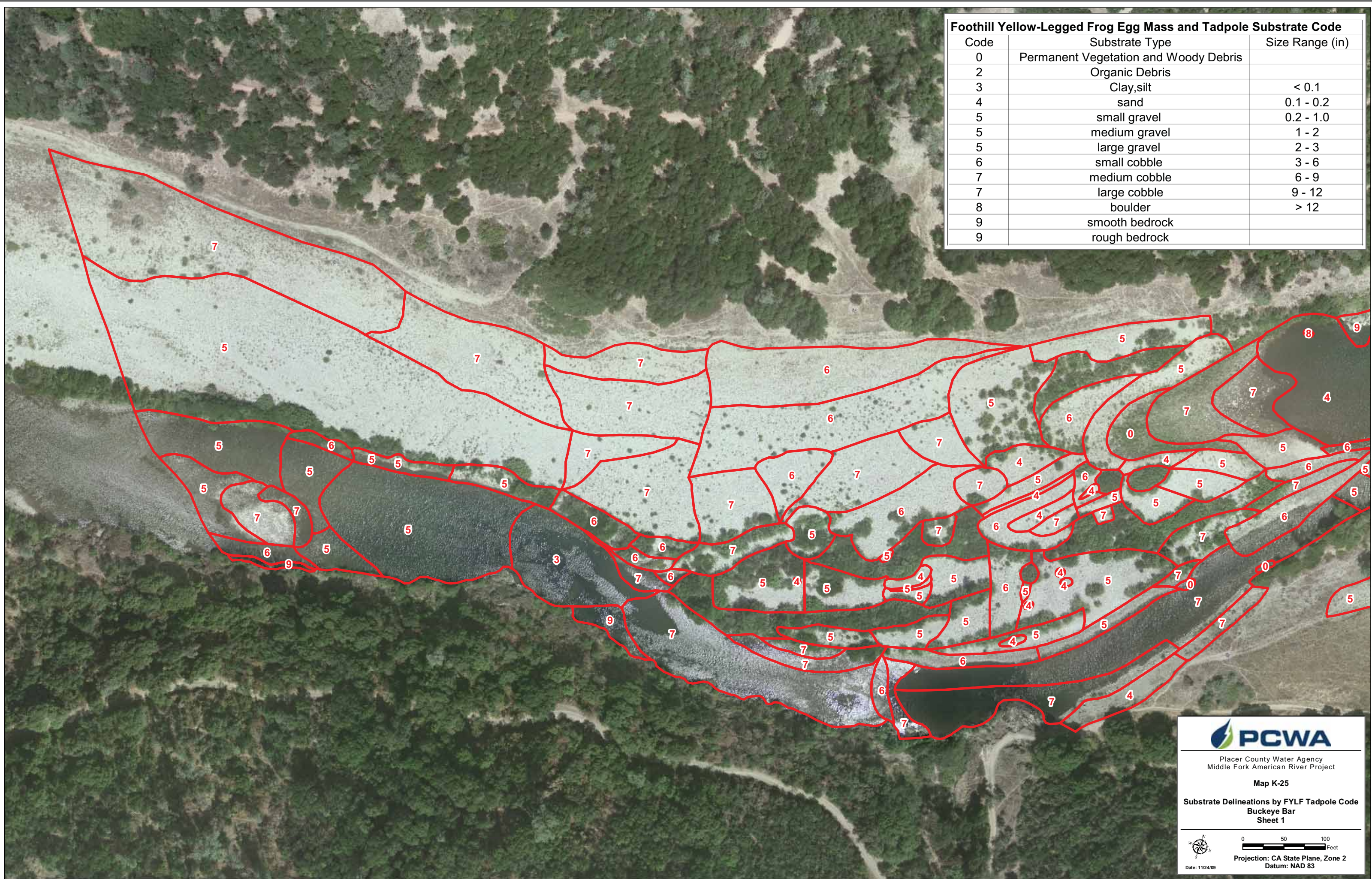
Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	




 Placer County Water Agency
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Map K-24
Substrate Delineations by FYLF Egg Mass Code
Buckeye Bar
Sheet 3



 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	



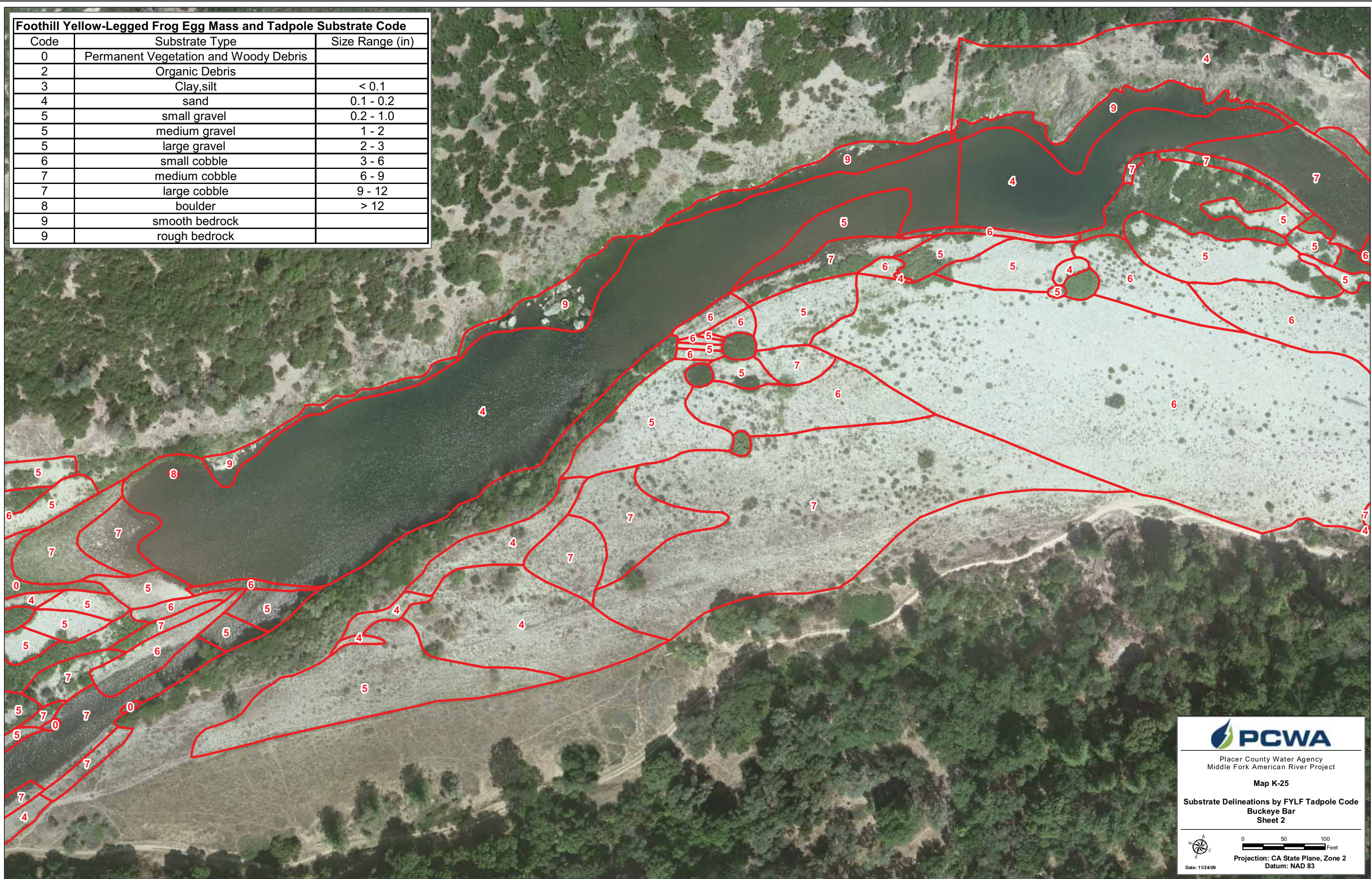
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Map K-25
Substrate Delineations by FYLF Tadpole Code
Buckeye Bar
Sheet 1

0 50 100 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83

Date: 11/24/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	

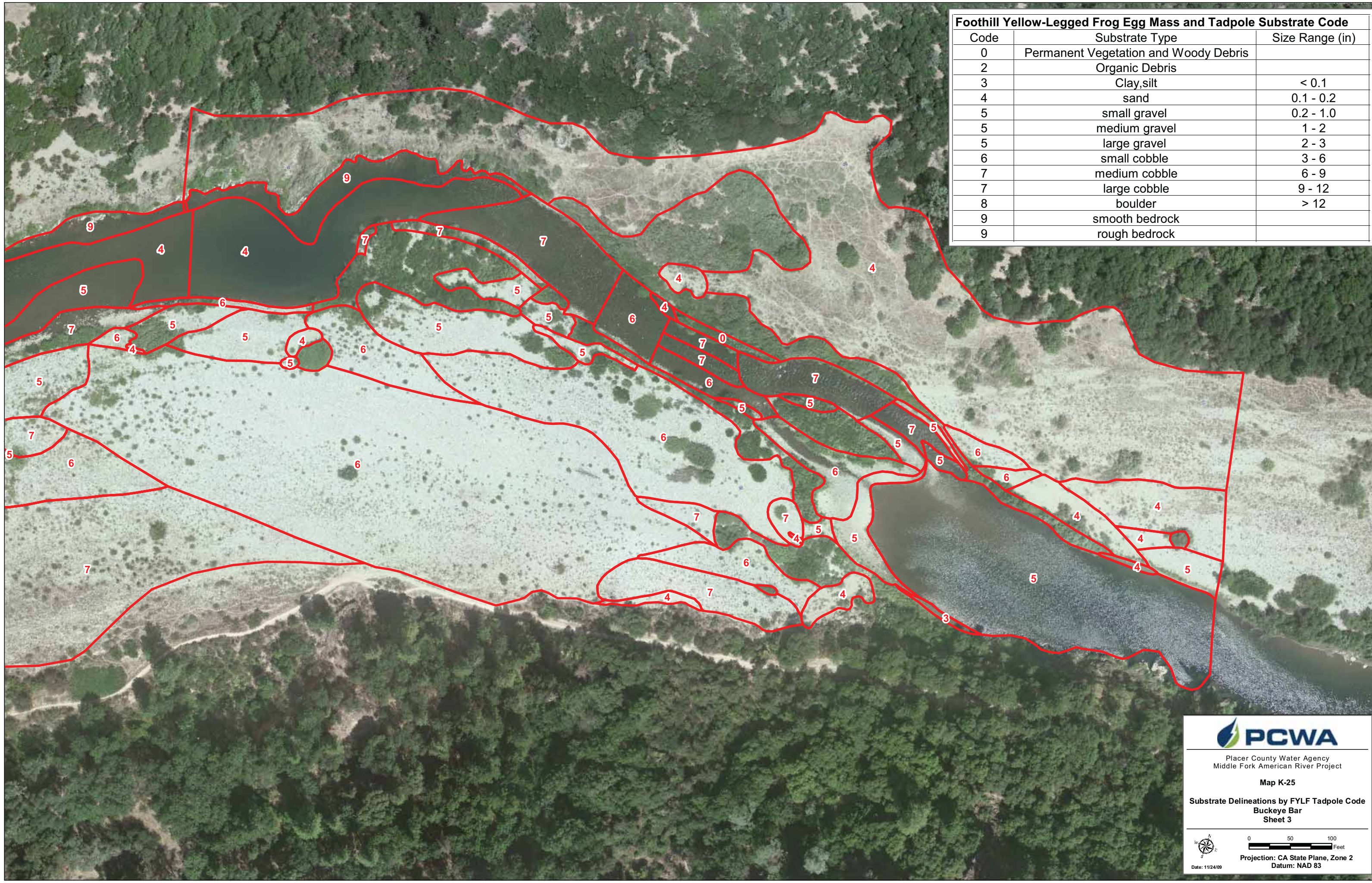



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Map K-25
Substrate Delineations by FYLF Tadpole Code
Buckeye Bar
Sheet 2


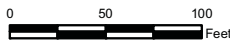
0 50 100 Feet
 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

Foothill Yellow-Legged Frog Egg Mass and Tadpole Substrate Code		
Code	Substrate Type	Size Range (in)
0	Permanent Vegetation and Woody Debris	
2	Organic Debris	
3	Clay,silt	< 0.1
4	sand	0.1 - 0.2
5	small gravel	0.2 - 1.0
5	medium gravel	1 - 2
5	large gravel	2 - 3
6	small cobble	3 - 6
7	medium cobble	6 - 9
7	large cobble	9 - 12
8	boulder	> 12
9	smooth bedrock	
9	rough bedrock	





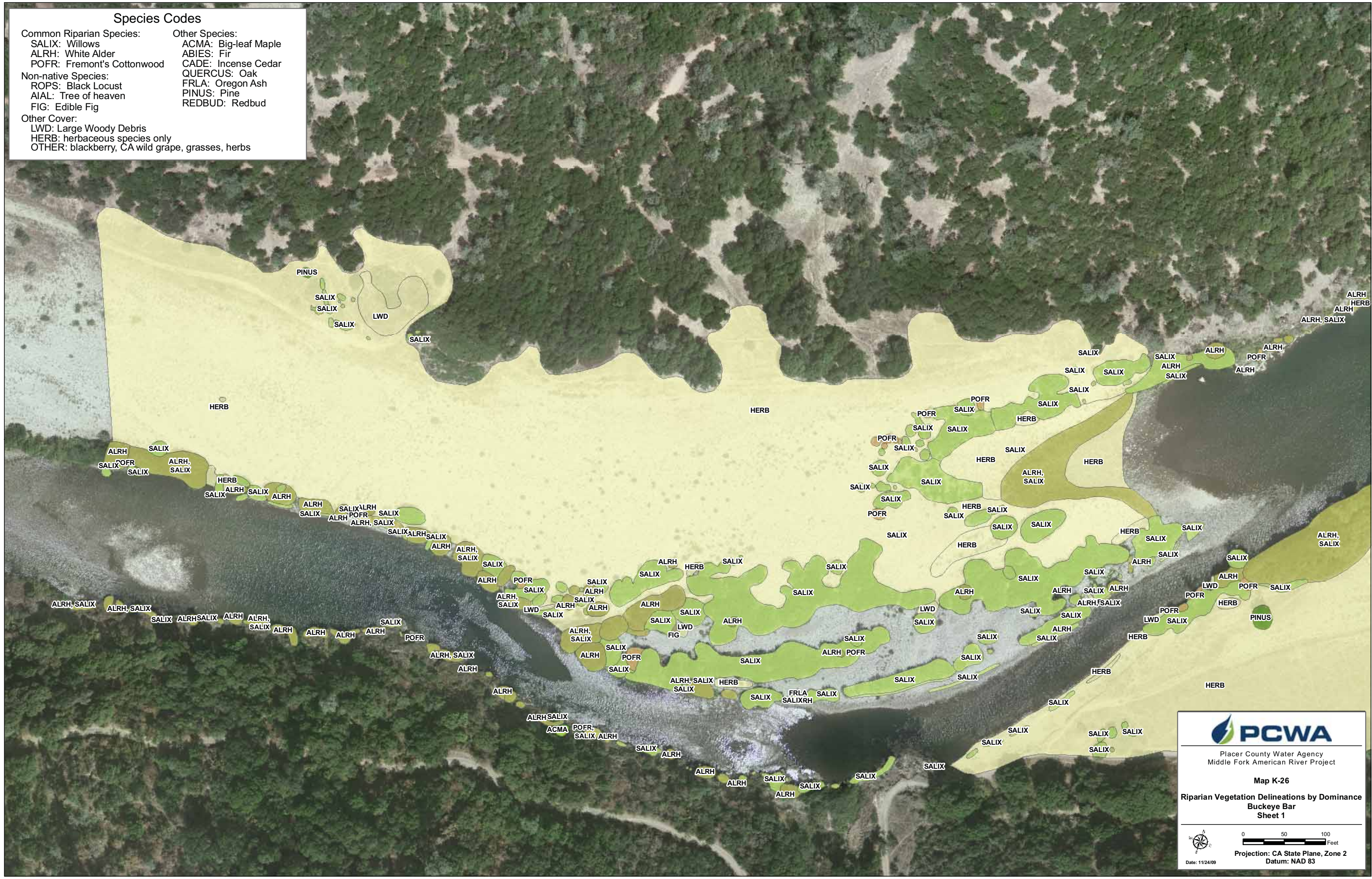
 Placer County Water Agency
 Middle Fork American River Project
Map K-25
Substrate Delineations by FYLF Tadpole Code
Buckeye Bar
Sheet 3





 Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09


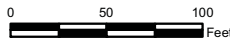
Species Codes

- | | |
|--|-----------------------|
| Common Riparian Species: | Other Species: |
| SALIX: Willows | ACMA: Big-leaf Maple |
| ALRH: White Alder | ABIES: Fir |
| POFR: Fremont's Cottonwood | CADE: Incense Cedar |
| Non-native Species: | QUERCUS: Oak |
| ROPS: Black Locust | FRLA: Oregon Ash |
| AIAL: Tree of heaven | PINUS: Pine |
| FIG: Edible Fig | REDBUD: Redbud |
| Other Cover: | |
| LWD: Large Woody Debris | |
| HERB: herbaceous species only | |
| OTHER: blackberry, CA wild grape, grasses, herbs | |




 Placer County Water Agency
 Middle Fork American River Project

Map K-26
Riparian Vegetation Delineations by Dominance
Buckeye Bar
Sheet 1

Projection: CA State Plane, Zone 2
 Datum: NAD 83
 Date: 11/24/09

Species Codes

Common Riparian Species:

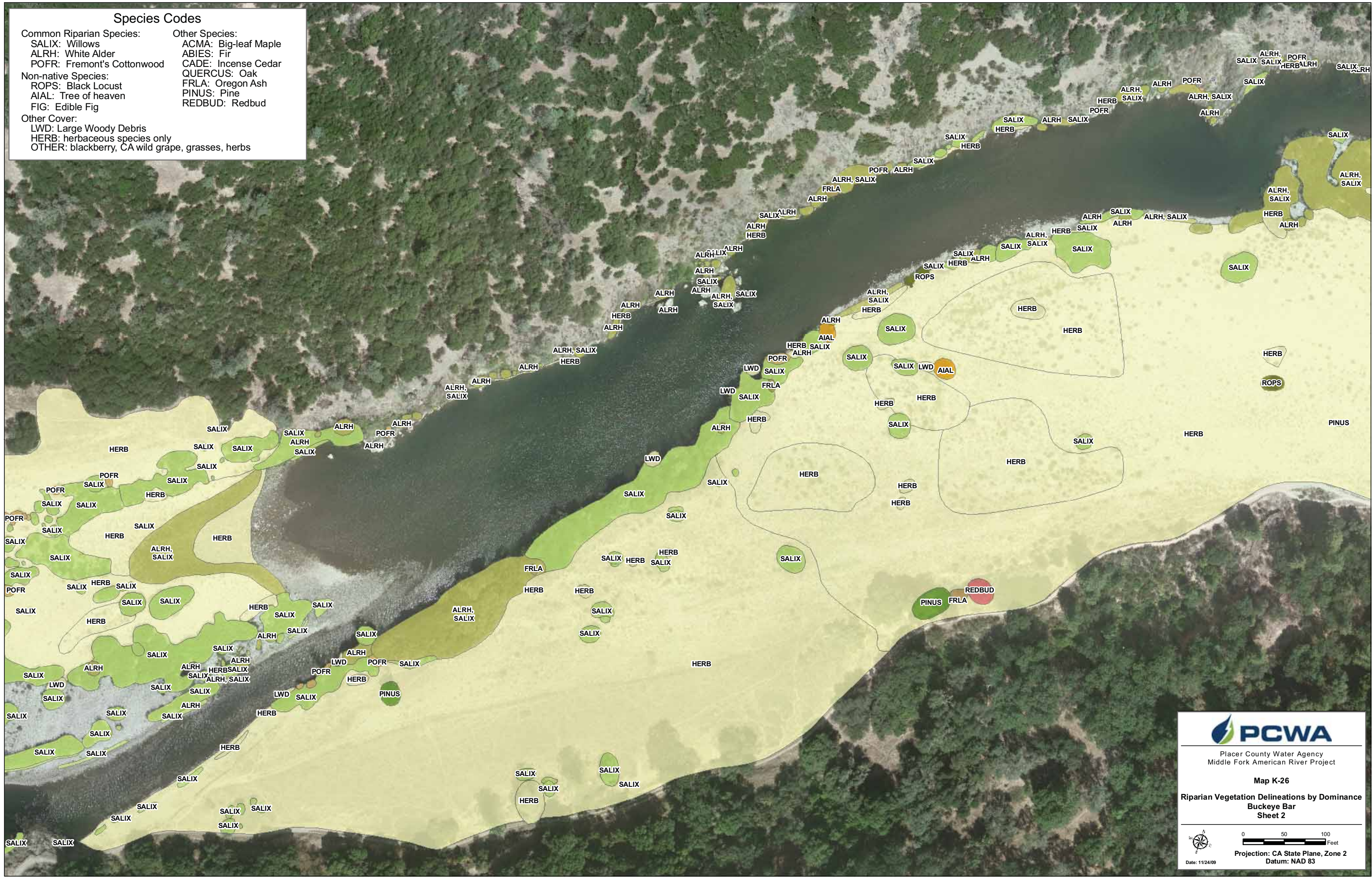
- SALIX: Willows
 - ALRH: White Alder
 - POFR: Fremont's Cottonwood
- Non-native Species:**
- ROPS: Black Locust
 - AIAL: Tree of heaven
 - FIG: Edible Fig

Other Species:

- ACMA: Big-leaf Maple
- ABIES: Fir
- CADE: Incense Cedar
- QUERCUS: Oak
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- PINUS: Pine
- REDBUD: Redbud

Other Cover:

- LWD: Large Woody Debris
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Map K-26
Riparian Vegetation Delineations by Dominance
Buckeye Bar
Sheet 2

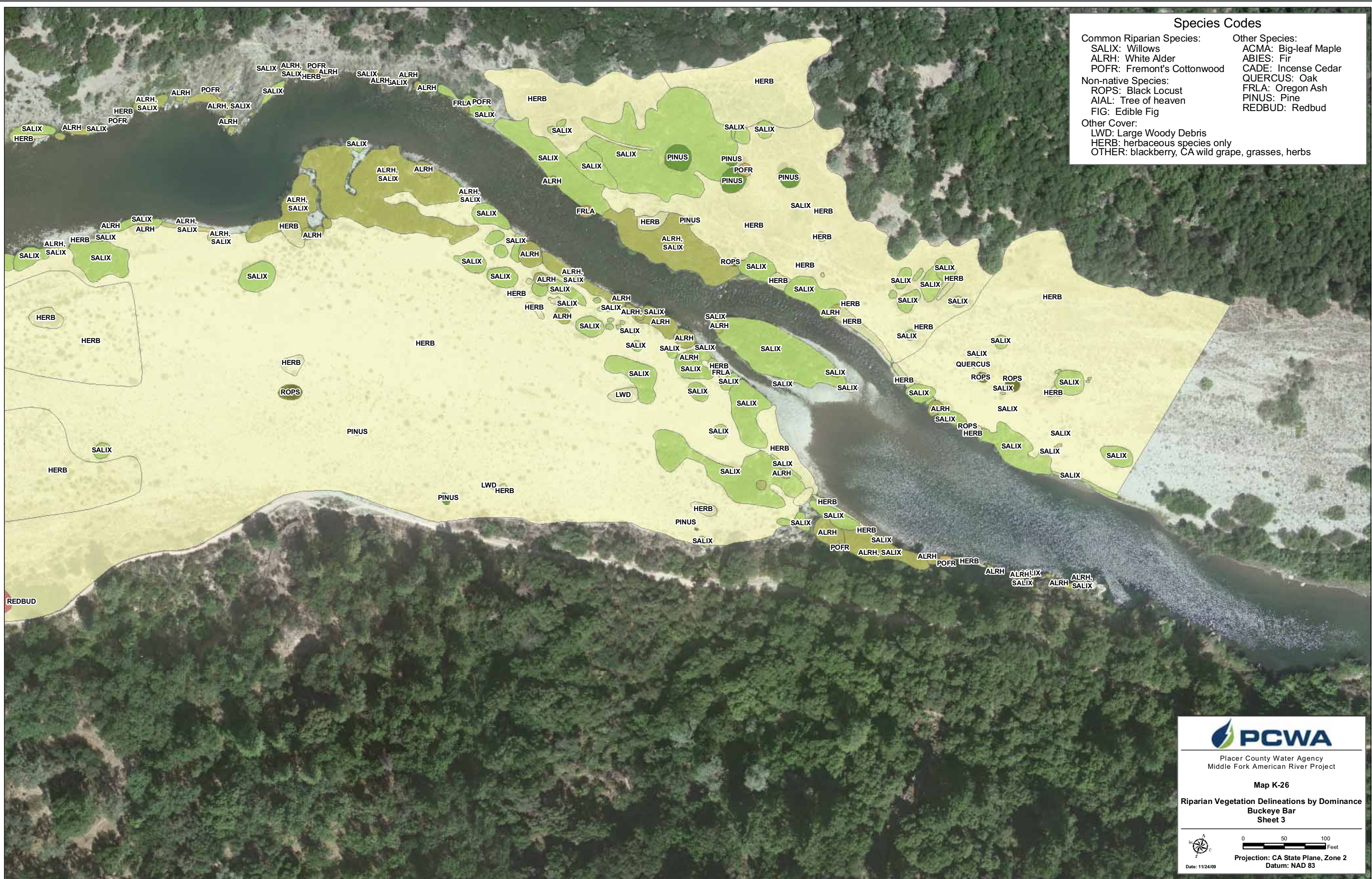
0 50 100
Feet

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

Date: 11/24/09

Species Codes

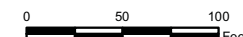
- | | |
|--|-----------------------|
| Common Riparian Species: | Other Species: |
| SALIX: Willows | ACMA: Big-leaf Maple |
| ALRH: White Alder | ABIES: Fir |
| POFR: Fremont's Cottonwood | CADE: Incense Cedar |
| Non-native Species: | QUERCUS: Oak |
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Map K-26

Riparian Vegetation Delineations by Dominance
Buckeye Bar
Sheet 3



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

Date: 11/24/09