

# EXECUTIVE DIRECTOR'S REPORT

February 7, 2018 Board of Directors meeting

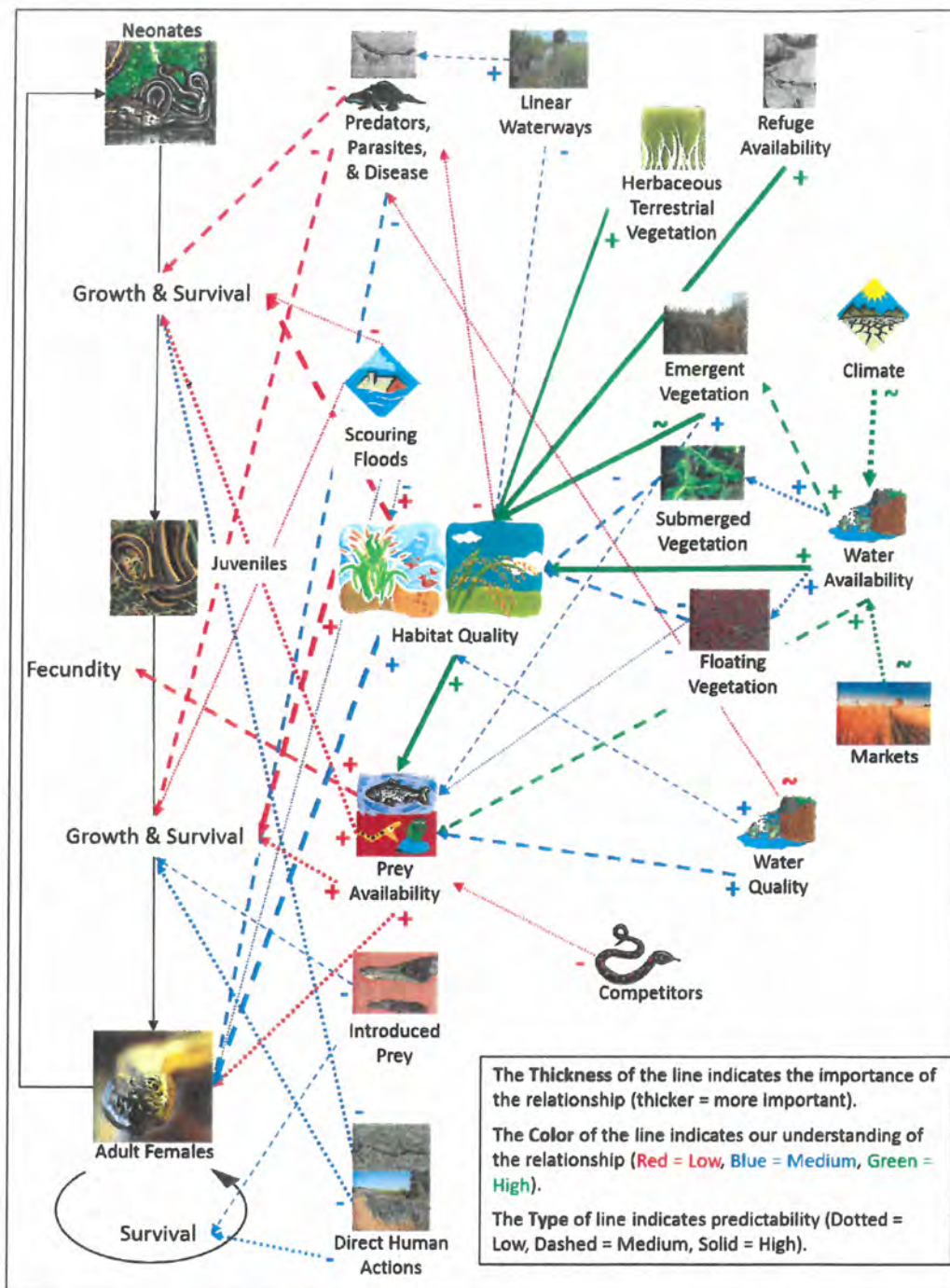
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Figure 1. 2017 trap and eDNA sampling locations and results on the TNBC Cummings Tract







**Figure 2.** Conceptual model for giant gartersnake population ecology in the Sacramento Valley, California. Black arrows indicate stage transitions in the giant gartersnake (*Thamnophis gigas*) life cycle. Weights of colored arrows indicate the strength of relationships (thicker lines = stronger relationships), line color indicates existing knowledge about the relationship (green = most knowledge, red = least knowledge), and line type indicates the predictability of the relationship (solid = most predictable, dotted = least predictable).



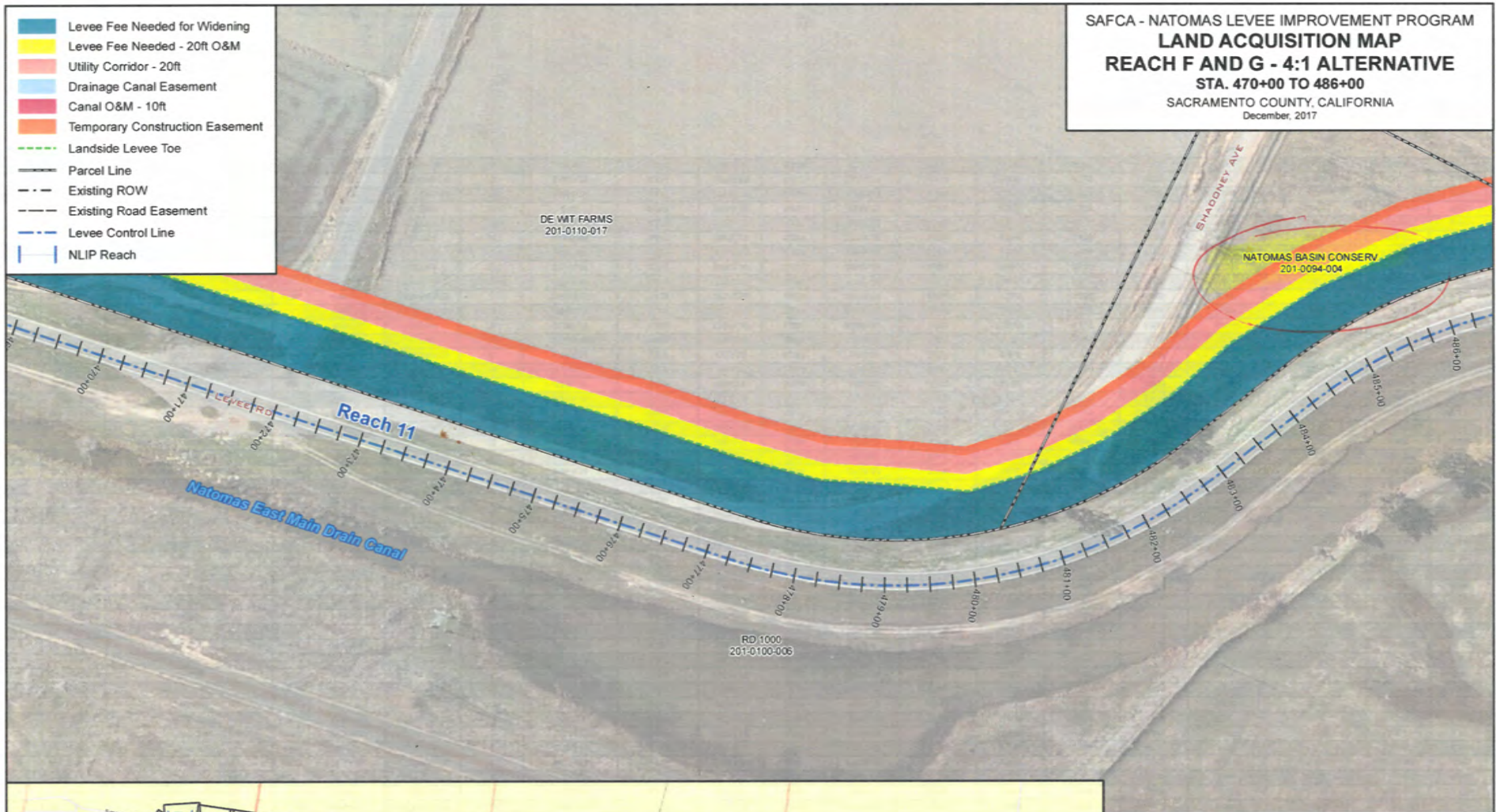
**NLIP Land Acquisitions -  
Reach F AND G - Alternative 4:1**

SAFCA NLIP - REACH F AND G PRELIMINARY LAND ACQUISITION ESTIMATE																			
COUNT	APN	OWNER	ZONE	PROPERTY TYPE	COUNTY	SUB-REACH	WIDENING FEE AREA-SF	WIDENING FEE AREA-AC	20FT Q&M AREA-SF	20FT Q&M AREA-AC	20 FT UTILITY AREA-SF	20 FT UTILITY AREA-AC	CANAL AREA-SF	CANAL AREA-AC	DRAINAGE AREA-SF	DRAINAGE AREA-AC	TOTAL AREA NEEDED IN FEE-AC	TCE AREA-SF	TCE AREA-AC
1	214-0010-011	AYDIS	A	PRIVATE	SACRAMENTO	7B	129128.46	2.964	37766.12	0.867	37076.05	0.851	0.000	0.000	0.000	0.000	4.683	18282.557	0.420
2	226-0010-002	AYDIS	A	PRIVATE	SACRAMENTO	7A	16741.36	0.384	7301.29	0.163	7132.53	0.164	0.000	0.000	0.000	0.000	0.711	3577.978	0.082
3	201-0540-073	BD PROPERTIES	AG80	PRIVATE	SACRAMENTO	7B	14563.74	0.334	7281.62	0.167	7589.66	0.183	0.000	0.000	0.000	0.000	0.685	4260.327	0.098
4	201-0190-043	BROWN	AG80	PRIVATE	SACRAMENTO	9	8340.31	0.191	7884.11	0.181	7878.60	0.181	0.000	0.000	0.000	0.000	0.553	3937.234	0.090
5	201-0051-001	CA SUNSHINE FISHERIES	AG80	PRIVATE	SACRAMENTO	11	30781.98	0.707	20173.84	0.463	20208.66	0.464	0.000	0.000	0.000	0.000	1.634	10117.384	0.232
6	35-290-013	CA SUNSHINE FISHERIES	AG	PRIVATE	SUTTER	12	16522.08	0.379	8583.07	0.197	8549.81	0.196	0.000	0.000	0.000	0.000	0.773	4262.429	0.098
7	201-0200-015	CARRILLO	AG80	PRIVATE	SACRAMENTO	8	5062.58	0.116	5929.30	0.136	5929.26	0.136	0.000	0.000	0.000	0.000	0.388	2964.615	0.068
8	201-0200-017	CAYOCCA	AG80	PRIVATE	SACRAMENTO	8	96775.78	2.222	27037.35	0.621	27046.23	0.621	0.000	0.000	0.000	0.000	3.463	13526.447	0.311
9	201-0200-022	CAYOCCA	AG80	PRIVATE	SACRAMENTO	8	10679.72	0.245	13579.22	0.312	13570.02	0.312	0.000	0.000	0.000	0.000	0.868	6781.557	0.156
10	201-0200-023	CAYOCCA	AG80	PRIVATE	SACRAMENTO	8	45563.27	1.046	19732.68	0.453	19769.38	0.454	0.000	0.000	0.000	0.000	1.953	9898.454	0.227
11	226-0020-005	CAYOCCA	A	PRIVATE	SACRAMENTO	7A	2497.91	0.057	3636.60	0.083	3631.63	0.083	0.000	0.000	0.000	0.000	0.224	1813.955	0.042
12	35-170-079	CHADARIS	AG	PRIVATE	SUTTER	14	653.36	0.015	6098.74	0.140	7092.79	0.163	0.000	0.000	0.000	0.000	0.318	3540.333	0.081
13	201-0110-017	DE WIT FARMS	AG80	PRIVATE	SACRAMENTO	10	351610.15	3.480	53069.27	1.218	53198.58	1.221	0.000	0.000	0.000	0.000	5.920	26652.170	0.612
14	201-0190-007	DRIGGS	AG80	PRIVATE	SACRAMENTO	9	62846.38	1.443	27637.76	0.634	27637.11	0.634	0.000	0.000	0.000	0.000	2.712	13818.311	0.317
15	226-0010-003	FONG	A	PRIVATE	SACRAMENTO	7A	12494.68	0.287	7854.41	0.180	7851.22	0.180	0.000	0.000	0.000	0.000	0.647	3924.418	0.090
16	201-0190-036	HENDRIX	AG80	PRIVATE	SACRAMENTO	9	12429.65	0.285	6398.55	0.147	6400.49	0.147	0.000	0.000	0.000	0.000	0.579	3200.970	0.073
17	201-0190-037	HENDRIX	AG80	PRIVATE	SACRAMENTO	9	19620.41	0.450	11310.07	0.260	11308.34	0.260	0.000	0.000	0.000	0.000	0.970	5653.520	0.130
18	226-0010-004	HORST	A	PRIVATE	SACRAMENTO	7A	8783.11	0.202	7702.04	0.177	7705.06	0.177	0.000	0.000	0.000	0.000	0.555	3853.666	0.088
19	201-0190-038	JAFFE	AG80	PRIVATE	SACRAMENTO	9	0.00	0.000	8407.94	0.193	8407.71	0.193	0.000	0.000	0.000	0.000	0.386	4203.266	0.097
20	35-170-080	JONES	AG	PRIVATE	SUTTER	14	3481.26	0.080	7782.99	0.179	7781.13	0.179	0.000	0.000	0.000	0.000	0.437	3889.857	0.089
21	35-271-025	KESSLER	AG	PRIVATE	SUTTER	14	9944.34	0.228	10870.34	0.250	10880.53	0.250	0.000	0.000	0.000	0.000	0.728	5444.082	0.125
22	201-0190-028	KOURTAS	AG80	PRIVATE	SACRAMENTO	9	39905.32	0.916	18441.28	0.423	18445.96	0.423	0.000	0.000	0.000	0.000	1.763	9224.740	0.212
23	201-0320-025	KRUMENACHER	Z00	PRIVATE	SACRAMENTO	7C	128165.90	2.942	50823.10	1.167	50845.37	1.167	0.000	0.000	0.000	0.000	5.276	25424.617	0.584
24	201-0190-045	LAVINE	AG80	PRIVATE	SACRAMENTO	8	16533.99	0.380	9232.60	0.212	9231.28	0.212	0.000	0.000	0.000	0.000	0.803	4615.149	0.106
25	201-0190-033	LUKENBILL	AG80	PRIVATE	SACRAMENTO	8	29590.89	0.679	17396.01	0.399	17395.36	0.399	0.000	0.000	0.000	0.000	1.478	8897.436	0.200
26	201-0200-021	MAZZA	AG80	PRIVATE	SACRAMENTO	8	3019.57	0.069	7541.83	0.173	7577.05	0.174	0.000	0.000	0.000	0.000	0.416	3785.999	0.087
27	35-271-024	NARAYAN	AG	PRIVATE	SUTTER	14	6738.88	0.155	5166.37	0.119	5166.62	0.119	0.000	0.000	0.000	0.000	0.392	2583.400	0.059
28	201-0091-003	NATOMAS BASIN CONSERV.	AG80	PRIVATE	SACRAMENTO	11	34669.54	0.796	12541.87	0.288	12539.61	0.288	0.000	0.000	0.000	0.000	1.372	6268.955	0.144
29	201-0094-003	NATOMAS BASIN CONSERV.	AG80	PRIVATE	SACRAMENTO	11	14187.32	0.326	6879.98	0.158	7622.16	0.175	0.000	0.000	0.000	0.000	0.659	4085.686	0.094
30	201-0094-004	NATOMAS BASIN CONSERV.	AG80	PRIVATE	SACRAMENTO	11	53450.35	1.227	12352.53	0.284	11478.72	0.264	0.000	0.000	0.000	0.000	1.774	0.000	0.000
31	35-280-001	ODYSSEUS FARMS	AG	PRIVATE	SUTTER	12	37184.47	0.854	55276.05	1.269	55338.78	1.270	27665.130	0.635	110632.108	2.540	6.568	27650.925	0.635
32	35-280-007	ODYSSEUS FARMS	AG	PRIVATE	SUTTER	12	36541.25	0.839	27434.09	0.630	27763.56	0.637	13880.832	0.319	55517.024	1.274	3.699	13877.680	0.319
33	35-280-010	ODYSSEUS FARMS	AG	PRIVATE	SUTTER	12	66491.46	1.526	27121.79	0.623	27125.86	0.623	0.000	0.000	0.000	0.000	2.772	13564.458	0.311
34	35-271-015	PAYNE	AG	PRIVATE	SUTTER	14	1398.74	0.032	7146.11	0.164	7426.83	0.170	0.000	0.000	0.000	0.000	0.367	3712.553	0.085
35	35-271-021	RASHED	AG	PRIVATE	SUTTER	14	4220.80	0.097	3808.76	0.087	3808.87	0.087	0.000	0.000	0.000	0.000	0.272	1904.471	0.044
36	201-0200-025	RD 1000	AG80	PUBLIC	SACRAMENTO	8	12017.35	0.276	4238.53	0.097	4239.03	0.097	0.000	0.000	0.000	0.000	0.470	2119.706	0.049
37	35-170-092	RIEGO 1700 LLC	AG	PRIVATE	SUTTER	14	27366.79	0.628	37481.90	0.860	37490.89	0.861	0.000	0.000	0.000	0.000	2.349	18748.828	0.430
38	35-260-002	SANKEY 380 LLC	AG	PRIVATE	SUTTER	14	51581.35	1.184	52305.40	1.201	52309.32	1.201	0.000	0.000	0.000	0.000	3.586	26156.134	0.600
39	201-0110-020	SCHWEDER	AG80	PRIVATE	SACRAMENTO	10	138877.30	3.188	53110.31	1.219	53113.70	1.219	0.000	0.000	0.000	0.000	5.627	26558.194	0.610
40	201-0200-024	SILVA	AG80	PRIVATE	SACRAMENTO	8	105349.58	2.418	28941.83	0.664	28907.39	0.664	0.000	0.000	0.000	0.000	3.747	14440.780	0.332
41	226-0020-003	SOLIS	A	PRIVATE	SACRAMENTO	7A	3041.94	0.070	7778.71	0.179	7775.97	0.179	0.000	0.000	0.000	0.000	0.427	3886.958	0.089
42	35-170-091	SORENSEN	M-2	PRIVATE	SUTTER	15	10993.07	0.252	20051.30	0.460	20046.98	0.460	0.000	0.000	0.000	0.000	1.173	10021.876	0.230
43	35-271-016	SOUTH SUTTER 6000 LLC	AG	PRIVATE	SUTTER	14	9904.60	0.227	16465.95	0.378	16863.40	0.387	0.000	0.000	0.000	0.000	0.993	8432.000	0.194
44	35-271-026	SOUTH SUTTER 6000 LLC	AG	PRIVATE	SUTTER	14	11895.56	0.273	10222.23	0.235	10221.16	0.235	0.000	0.000	0.000	0.000	0.742	5110.177	0.117
45	35-170-044	STEVENSON	AG	PRIVATE	SUTTER	15	12653.24	0.290	15531.34	0.357	15527.62	0.356	0.000	0.000	0.000	0.000	1.003	7762.416	0.178
46	35-170-003	TDW ENTERPRISES LP	AG	PRIVATE	SUTTER	14	0.00	0.000	19013.03	0.436	20624.75	0.473	0.000	0.000	0.000	0.000	0.910	10316.269	0.237
47	201-0320-018	TWIN RIVERS USD	AG80	PUBLIC	SACRAMENTO	7B	18031.76	0.414	13028.79	0.299	13030.24	0.299	0.000	0.000	0.000	0.000	1.012	6515.662	0.150
48	201-0320-019	TWIN RIVERS USD	AG80	PUBLIC	SACRAMENTO	7B	31623.79	0.726	13796.08	0.317	13774.74	0.316	0.000	0.000	0.000	0.000	1.359	6879.365	0.158
49	226-0020-004	UNZUETA	A	PRIVATE	SACRAMENTO	7A	180.02	0.004	6893.07	0.158	7717.97	0.177	0.000	0.000	0.000	0.000	0.340	3859.356	0.089
TOTAL																	78.837		9.620



SAFCA - NATOMAS LEVEE IMPROVEMENT PROGRAM  
**LAND ACQUISITION MAP**  
**REACH F AND G - 4:1 ALTERNATIVE**  
 STA. 470+00 TO 486+00  
 SACRAMENTO COUNTY, CALIFORNIA  
 December, 2017

- Levee Fee Needed for Widening
- Levee Fee Needed - 20ft O&M
- Utility Corridor - 20ft
- Drainage Canal Easement
- Canal O&M - 10ft
- Temporary Construction Easement
- Landside Levee Toe
- Parcel Line
- Existing ROW
- Existing Road Easement
- Levee Control Line
- NLIP Reach

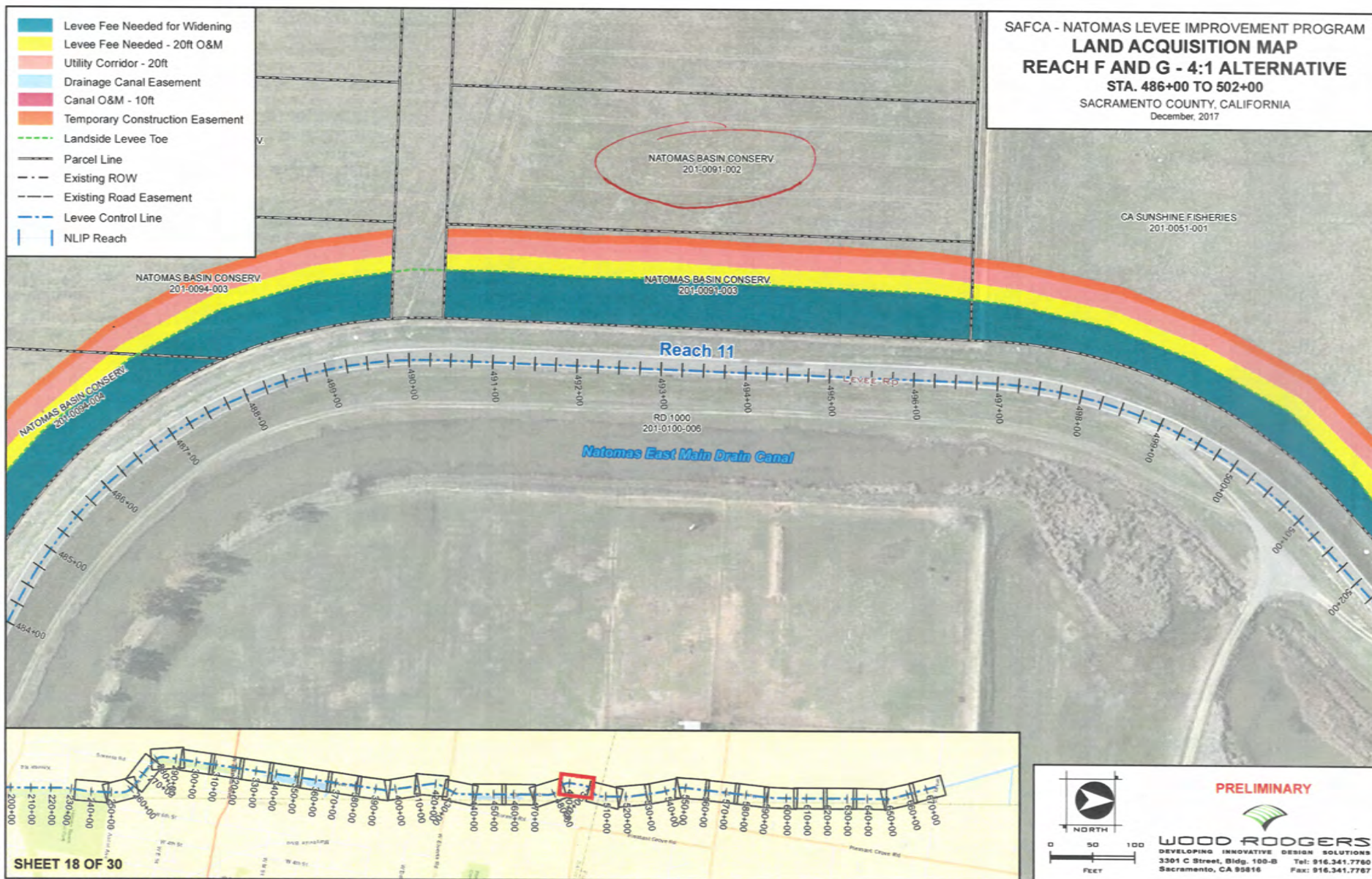


SHEET 17 OF 30

**PRELIMINARY**

**WOOD RODGERS**  
 DEVELOPING INNOVATIVE DESIGN SOLUTIONS  
 3301 C Street, Bldg. 100-B Tel: 916.341.7760  
 Sacramento, CA 95816 Fax: 916.341.7767











The Natomas Basin Conservancy  
Sacramento Area Flood Control Agency

December 18, 2017

1. Master Agreement
  - a. Signed - March 4, 2009; Amendment 1 - March 12, 2012
  - b. Annual Estimate Procedure
    - estimated/actual TNBC labor
    - managed acreage percentage of overhead
  - c. 2017 Summary of Expenses
  - d. 2018 Anticipated Expenses
  - e. EPS Update on SAFCA HCF Cost Model
    - fixed asset inventory and replacement costs
  - f. CVRWQCB - Irrigated Lands Regulatory Program (PNSSNS Subwatershed Group)
  - g. Natomas Farms East Outlet Reconfiguration Project - reseeding
  - h. Irrigation Well Testing
2. Implementation Agreement 1 - Brookfield
  - a. Signed - June 3, 2009; Amend 1 - September 16, 2010 ; Amend 2 - May 19, 2011;  
Amend 3 - March 15, 2012; Amend 4 - March 6, 2013; Amend 5 - August 21, 2014
  - b. Historic Income and Expense Summary
  - d. 2017 Summary of Expenses
  - e. 2018 Anticipated Expenses
  - f. Tenant Lease
  - g. Endowment Funds Investment Policy
  - h. Conservation Easement – pending
  - i. SSIP/SSMP – pending
3. Implementation Agreement 2 - Novak
  - a. Signed - April 3, 2013
  - b. 2017 Summary of Expenses
  - d. 2018 Anticipated Expenses
  - e. Conservation Easement – pending
  - f. Water Service
  - g. SSIP/SSMP – pending
  - h. Tenant Lease (send all new tenant leases to Jennifer H. once completed needed for County's Possessory Interest Renewals)
4. Implementation Agreement 3 - Pappa-Rosa
  - a. Signed - April 3, 2013; Amend 1 - ??, 2017 (to reflect sale of Area X to RD 1000)
  - b. 2017 Summary of Expenses
  - d. 2018 Anticipated Expenses
  - e. Conservation Easement – pending
  - f. SSIP/SSMP – pending
  - g. Sale of Area X to RD 1000
  - h. Tenant Lease
5. Implementation Agreement 4 - Sharma & AKT Agricultural Fields
  - a. Signed - November 1, 2013
  - b. 2017 Summary of Expenses
  - c. 2018 Anticipated Expenses
  - d. Conservation Easement – pending



- e. SSIP/SSMP – pending
  - f. Tenant Lease
6. Implementation Agreement 5 - South Sutter
    - a. Signed - September 22, 2014
    - b. 2017 Summary of Expenses
    - c. 2018 Anticipated Expenses
    - d. Conservation Easement – pending
    - e. SSIP/SSMP – pending
    - f. Slope Repairs
    - g. Tenant Lease
  7. Implementation Agreement 6 - Willey
    - a. Signed - August 21, 2014
    - b. Interim until USACE constructs West Drain realignment
    - c. 2017 Summary of Expenses
    - d. 2018 Anticipated Expenses
    - e. Tenant Lease
  8. Implementation Agreement 7 - Hewitt
    - a. Signed - November 10, 2014
    - b. Interim until transfer to Sacramento County Airports
    - c. 2017 Summary of Expenses
    - d. 2018 Anticipated Expenses
    - e. Water Source (none)
    - f. Tenant Lease
  9. Implementation Agreement 8 - Sharma, AKT & Natomas Farms West Marshes
    - a. Signed – June 21, 2017
    - b. Interim operation by HRS under contract to SAFCA
    - c. 2017 Summary of Expenses
    - d. 2018 Anticipated Expenses
    - e. Conservation Easement – pending
    - f. SSIP/SSMP – pending
    - g. Payment of monthly SMUD and quarterly NCMWC invoices under Impl Agree 8
    - h. Marsh Monitoring by ICF competitive bid for 2018?
    - i. Land Management Contract with HRS
  10. Implementation Agreement 9 - Lower GGS Canal Monitoring
    - a. Signed – June 15, 2017
    - b. SAFCA requested TNBC to amend their contract with ICF and GGS sample to include canal monitoring during 2017 scope for 3<sup>rd</sup> party observer per agreement w/ RD1000
    - c. 2017 Summary of Expenses
    - d. 2018 Anticipated Expenses
    - e. Drainage Easement to RD 1000 for Lower GGS Canal
    - f. SSIP/SSMP SAFCA to monitor RD1000 – pending
  11. Implementation Agreement 10 - Woodlands
    - a. Not anticipated before 2019
    - b.
  12. TNBC-SAFCA Agreements Flow Chart
    - a. List of Responsibilities



13. Natomas Farms West
  - a. Fence Agreement Status  
SAFCA Exec Director has authority to execute
  - b. Access road maintenance Complete? Billed to IA8?
14. TNBC Cummings Tract - SAFCA AKT Tract
  - a. Fish Well 2 Joint Use and Easement Agreement
15. TNBC Huffman West Tract
  - a. Lauppe - TNBC Joint Use and Easement Agreement  
TNBC to check with Lauppe if wells were producing enough
16. NCC Right of Way
  - a. NCMWC and PG&E easements and quitclaims on Lucich North and Frazer North  
Approved by TNBC Board April 5, 2017
17. SREL Right of Way updates?
  - a. SAFCA purchase of 9.7 +/- acres from TNBC's Cummings Tract for levee, woodland and canal
  - b. SAFCA purchase of 16.8 +/- acres from TNBC's Allegheny Tract for levee, woodland and canal
  - c. TNBC purchase of 37.9 +/- acres of marsh habitat in SAFCA's AKT Tract
  - d. TNBC purchase of 16.0 +/- acres of Swainson hawk HQFH habitat in SAFCA's AKT Tract
18. Sankey Gap Floodplain Storage
  - a. TNBC consulting re suitability of detention area for HCP habitat
19. Miscellaneous
  - a. Piezometers on TNBC properties
  - b. water control structures (define who owns), etc.  
Inventory of all fixed structures (water controls/piezometers) after TNBC/SAFCA trade/buy figure out who owns what and write an agreement.
  - c. Incidental Take Permit  
check if SAFCA had coverage from Fish and Wildlife



From: **John Pritchard** [jpritchard@WoodRodgers.com](mailto:jpritchard@WoodRodgers.com)   
Subject: SAFCA Sankey Road Gap Alternatives Analysis - Giant Garter Snake Habitat Design  
Date: November 27, 2017 at 5:30 PM  
To: [myoung@westervelt.com](mailto:myoung@westervelt.com)  
Cc: **Jonathan Kors** [jkors@WoodRodgers.com](mailto:jkors@WoodRodgers.com), [jroberts@natomasbasin.org](mailto:jroberts@natomasbasin.org), **Bassett, John** [bassettj@SacCounty.NET](mailto:bassettj@SacCounty.NET), **Peter Blum** [pblum@WoodRodgers.com](mailto:pblum@WoodRodgers.com)

Mark,

Thanks for taking the time to chat this afternoon. As we discussed, we are making good progress on our 10% design for providing a flood control solution for the Sankey Road Gap overflow into the Natomas Basin. We believe we're at a point where it would be productive to sit down with you to walk through where we're at and discuss ideas for preparing material to advance discussions with the resource agencies. Please let me know if you have a schedule opening in the next few weeks to meet for an hour or so.

**John Pritchard** - P.E., CFM  
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# Scoring a goal

*California Rice Experiment Station unveils herbicide-resistant ROXY rice.*

t Rice

By Vicky Boyd  
Editor

**B**reeders at the California Rice Experiment Station near Biggs recently unveiled ROXY rice—a line of medium-grain resistant to oxyfluorfen herbicide.

Three years into development, Rice Experiment Station director Dr. Kent McKenzie, who's leading the project, says he's pleased with the success so far. But he says several challenges remain, such as finding a registrant who wants to partner with the RES to bring an herbicide to market and registering oxyfluorfen for rice.

"Developing the variety is not the problem," McKenzie says, adding he wouldn't venture to guess when the first ROXY rice would become commercially available to growers.

Currently, oxyfluorfen — marketed under several brand names including GoalTender and Goal 2XL — is not registered for use in rice in the United States. But it is labeled for weed control on a broad array of crops, including soybeans, corn, cotton, tree fruit, grapes and nuts. A PPO inhibitor, the herbicide controls a wide variety of grasses and broadleaf weeds.

To date, no rice weeds have confirmed resistance to PPOs, McKenzie says.

The rice herbicide Shark, or carfentrazone-ethyl, also is a PPO. There is "some indication" that small-flower umbrella sedge may be growing more tolerant to the product, says Dr. Kassim Al-Khatib, a University of California, Davis, weed science professor.

McKenzie says they chose to work with oxyfluorfen because it is an off-patent material already used on a number of crops excluding rice. As an off-patent material, the herbicide is relatively inexpensive.

He envisions growers being able to apply the material to ground that's already been prepared for planting, possibly just behind a roller. Then growers would flood fields and have seed flown into the water, just like they do today.

When asked about expected water hold times, McKenzie says he didn't know since the research is still in the early stages.

ROXY rice, which stands for "resistant to oxyfluorfen," was developed using traditional induced mutagenesis. This technique has been widely used in

breeding numerous crops, including the first California semi-dwarf, Calrose 76, as well as M-401, Clearfield and Provisia lines. Varieties developed using this technique are not considered genetically modified organisms or GMOs.

The ROXY project began in 2014 when Rice Experiment Station breeders generated mutations and screened 20 to 30 acres for the resistance trait by spraying plants with oxyfluorfen.

"Yes, this was really spray and pray, and we prayed a lot," McKenzie says.

That summer, they identified 29 plants that showed resistance to Goal 2XL. Those were eventually winnowed down to nine with oxyfluorfen resistance.

McKenzie describes the herbicide-resistance trait as recessive. That means if ROXY rice outcrossed with red rice, the resistance would not be transferred to the progeny in theory, he says.

During 2015, the breeders began purifying the line and transferring the trait to another variety. They chose M-206 because of its natural tolerance to oxyfluorfen.

In addition, the researchers looked at different oxyfluorfen rates and application timings to see how the rice would respond and to confirm resistance.

Also in 2015, they conducted their first collaborative field test with Jim Cook, director of research and technology at Colusa Farm Supply.

Much like the development of other California varieties, the ROXY group relied on the Hawaii nursery to increase seed during the winter.

During 2016, the researchers conducted tests akin to genetic fingerprinting to determine where the mutation occurred within the rice DNA. At the same time, they filed a provisional patent on the herbicide-resistance trait.

Through different crosses and backcrosses, the breeders now have a line referred to as Y3000. This winter, Y3000 will be sent to the Hawaii nursery for seed increase, so researchers will have more material in 2018 to include in the statewide rice nursery program.

The three-year ROXY special project was underwritten by the grower-funded California Rice Research Board.

effective on watergrasses?