

Data Sharing by the Enhanced Delta Smelt Monitoring Program (EDSM)

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USFWS, Lodi FWO



Data Management, Visualization, and Access Workshop
April 18, 2024

EDSM objectives

- Estimate total weekly abundance of Delta Smelt
- Estimate spatial distribution of Delta Smelt
- Support real-time water operations and management decisions
- Support ongoing Delta Smelt research and management objectives



Dec 2016-January 2024
934,597 individual fish identified
70 fish species identified



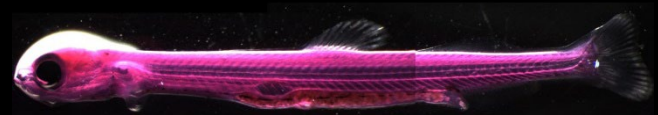
2,104 Chinook Salmon



10,692 Longfin Smelt



17,232 Wakasagi



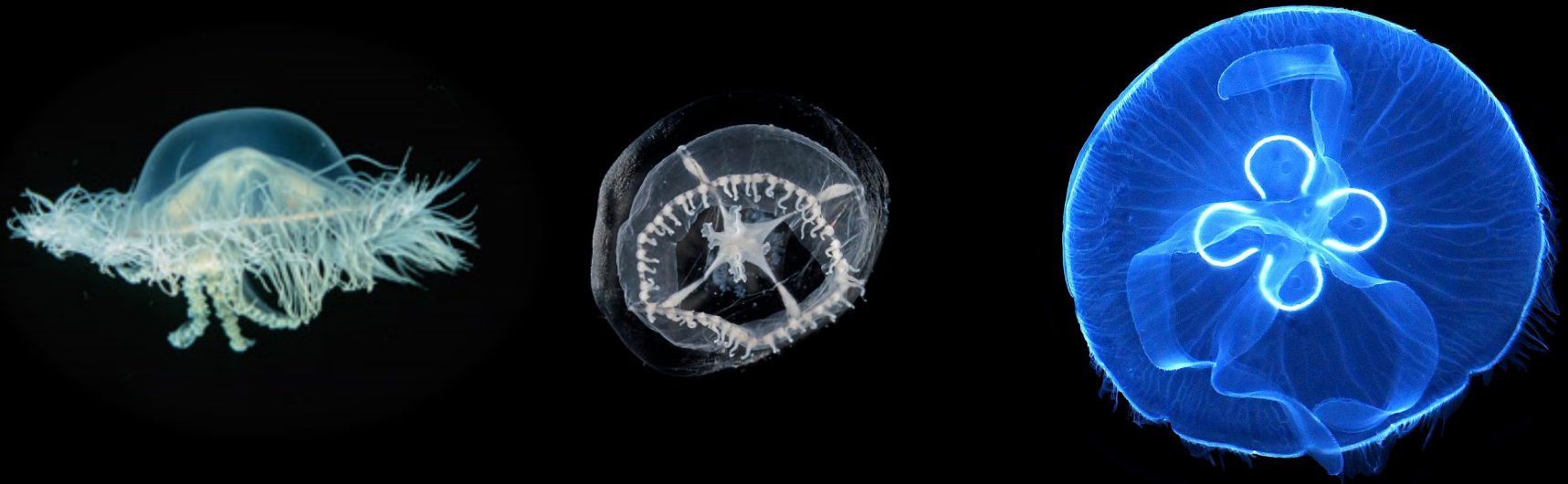
1,157 Delta Smelt

Photo credit: Rene Reyes, USBR
Photo credit: Andrew Goodman, USFWS (larva)

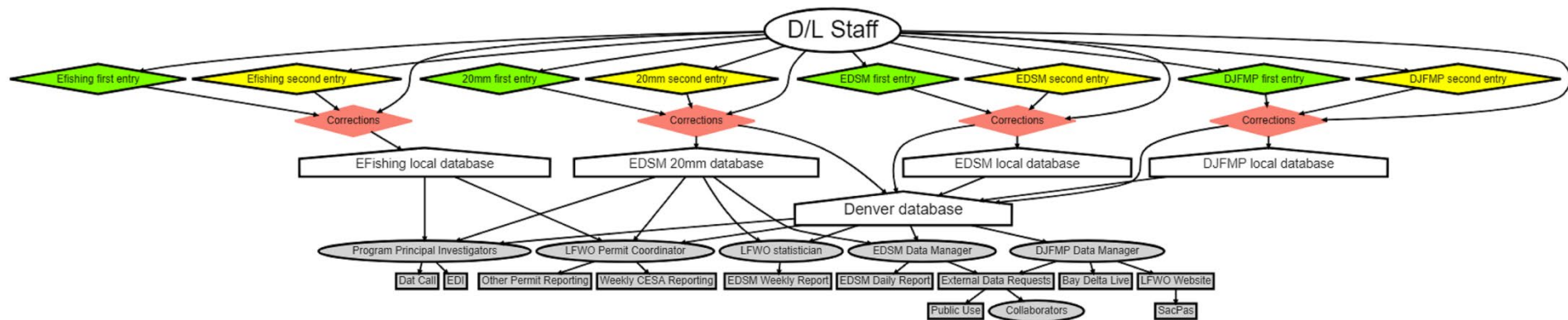
65,067 individual shrimp identified



477,955 individual jellyfish identified



Data workflow



Data workflow



Delta Juvenile Fish Monitoring Program (DJFMP)

Home
DJFMP
EDSM
Search
Create
Compare
Logout

Find Entrainment Samples

Sample ID:

Sample Date Range: To

Station Code:

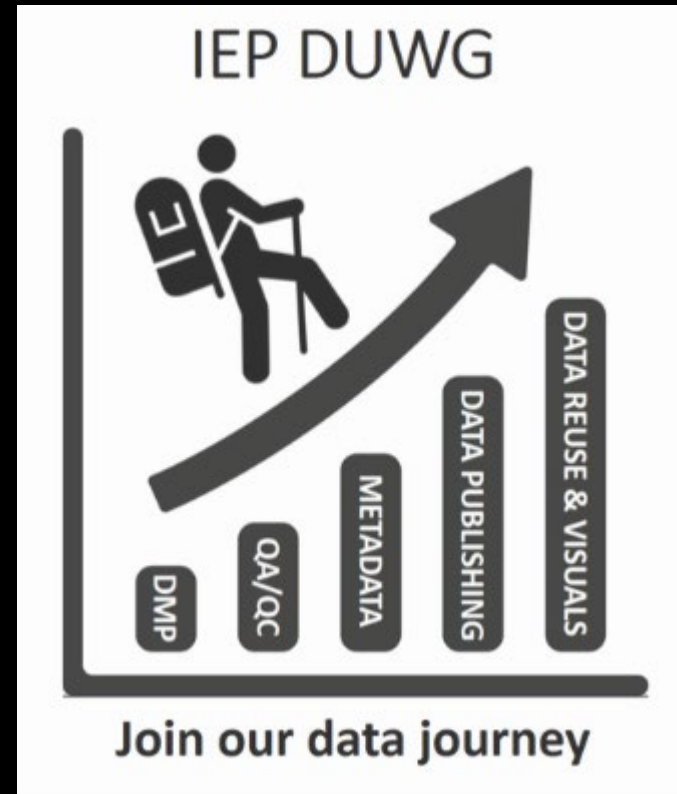
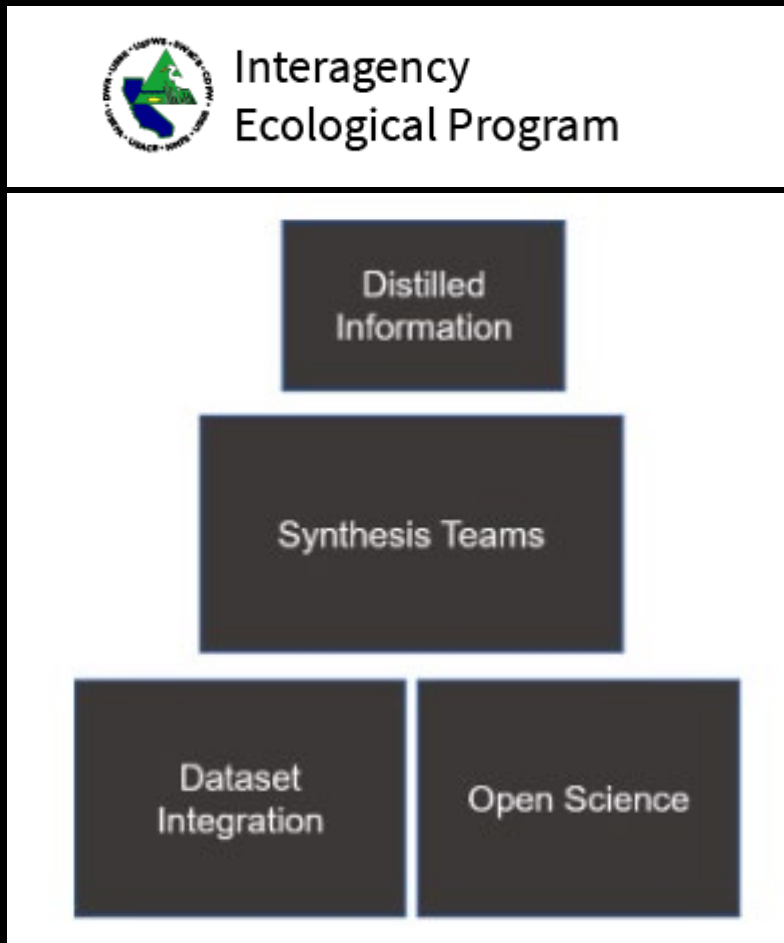
Regions:
North
South
West

Subregions:
Far West-East San Pablo Bay
Far West-Lower Napa River
Far West-Upper Napa River

Page Size:

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How do agencies share data?



<https://iep.ca.gov/Data/Data-Utilization-Working-Group>

<https://iep.ca.gov/Science-Synthesis-Service/Directed-Studies-Synthesis>

How does EDSM share data?

- Daily report email and data file
- Weekly datcall email and data file
- Weekly Delta Smelt abundance report
- Weekly Smelt Monitoring Team report
- Post data to USFWS website
- BayDeltaLive/SacPAS
- Environmental Data Initiative (EDI)
- Integrated datasets
- Data queries upon request

EDSM daily report

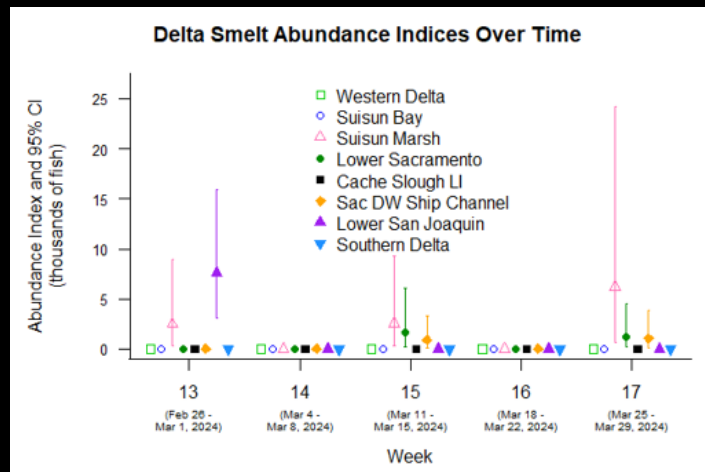
Date	Stratum	Larvae Delta Smelt Count (<20mm)	Juvenile Delta Smelt Count (20-58mm)	Adult Delta Smelt Count (>58mm)	Marked Delta Smelt Catch
12/7/2023	Lower Sacramento River	0	0	0	1
1/16/2024	Lower Sacramento River	0	0	0	1
1/22/2024	Suisun Marsh	0	0	1	1
1/24/2024	Sac Deep Water Shipping Channel	0	0	0	1
1/24/2024	Suisun Marsh	0	0	0	1
1/25/2024	Lower Sacramento River	0	0	0	1
1/31/2024	Lower San Joaquin	0	0	0	1
2/1/2024	Suisun Marsh	0	0	0	1
2/5/2024	Lower San Joaquin	0	0	0	3
2/5/2024	Suisun Marsh	0	0	1	1
2/6/2024	Suisun Marsh	0	0	0	1
2/7/2024	Lower Sacramento River	0	0	0	2
2/8/2024	Lower Sacramento River	0	0	0	1
2/8/2024	Lower San Joaquin	0	0	0	1
2/12/2024	Western Delta	0	0	0	1
2/13/2024	Lower San Joaquin	0	0	0	1
2/14/2024	Suisun Marsh	0	0	0	2
2/26/2024	Lower San Joaquin	0	0	0	1
2/27/2024	Suisun Marsh	0	0	0	1
2/28/2024	Lower San Joaquin	0	0	0	2
3/11/2024	Sac Deep Water Shipping Channel	0	0	0	1
3/11/2024	Suisun Marsh	0	0	0	1
3/13/2024	Lower Sacramento River	0	0	0	1
3/25/2024	Lower Sacramento River	0	0	0	1
3/25/2024	Suisun Marsh	0	0	0	2
3/26/2024	Sac Deep Water Shipping Channel	0	0	0	1
	Total	0	0	2	32

EDSM daily report

Excel 133EDSMDailyReport24Feb13.xlsx																			
Open in Excel																			
Download Save to OneDrive																			
File Home Insert Share Page Layout Formulas Data Review View Automate Help Draw Tell me what you want to do																			
Viewing Comments																			
Undo Paste Clipboard Font Alignment Number Styles Cells Editing Add-ins																			
LFS flash frozen for transfer to DOP.																			
	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
400	29-SD05	South	Mildred Island West	8:28	397.4	11.4	8.17	1.3	5.28	Kodiak	4	10	D	n/p	n/p	n/p	n/p	n/p	n/p
401	29-SB04	West	Confluence	8:37	231.08	10.83	147.5	0.19	12.3	Kodiak	4	10	U	CHNF	1	43	n/p	3	None
402	29-SB04	West	Confluence	8:37	231.08	10.83	147.5	0.19	12.3	Kodiak	4	10	U	RBTC	2	197-230	n/p	5	AdClipped
403	29-WD01	Far West	Carquinez Strait	15:04	2649	11.55	153	0.18	24.05	Kodiak	2	10	D	DSMT	1	70	n/p	n/p	VIE-LOP
404	29-WD01	Far West	Carquinez Strait	15:04	2649	11.55	153	0.18	24.05	Kodiak	2	10	D	LFS	7	68-83	n/p	n/p	None
405	29-WD02	Far West	Carquinez Strait	13:17	3022.75	11.5	174.25	0.17	8.03	Kodiak	4	10	D	LFS	5	68-82	n/p	n/p	None
406	29-WD02	Far West	Carquinez Strait	13:17	3022.75	11.5	174.25	0.17	8.03	Kodiak	4	10	D	RBTC	1	229	n/p	5	AdClipped
407	29-WD03	Far West	Carquinez Strait	11:32	1408	11.3	188.25	0.18	18	Kodiak	4	10	D	LFS	7	68-78	n/p	n/p	None
408	29-CS01	North	Cache Slough and Liberty Island	9:58	260	10.65	92.02	0.15	4.42	Kodiak	4	10	U	n/p	n/p	n/p	n/p	n/p	n/p
409	29-CS02	North	Cache Slough and Liberty Island	11:23	320.53	10.87	63.3	0.21	3.78	Kodiak	4	10	U	n/p	n/p	n/p	n/p	n/p	n/p
410	29-CS03	North	Cache Slough and Liberty Island	8:22	n/p	n/p	n/p	n/p	n/p	Kodiak	0	n/p	n/p	n/p	n/p	n/p	n/p	n/p	n/p
411	29-CS04	North	Cache Slough and Liberty Island	8:36	250.27	10.53	95.97	0.16	6.3	Kodiak	4	10	U	RBTC	1	211	n/p	5	AdClipped
412	29-LSJ02	South	San Joaquin at Prisoners Point	8:12	223.23	10.6	42.25	0.33	8.82	Kodiak	4	10	U	CHNF	8	35-47	n/p	2	None
413	29-LSJ02	South	San Joaquin at Prisoners Point	8:12	223.23	10.6	42.25	0.33	8.82	Kodiak	4	10	U	DSMT	1	78	n/p	n/p	VIE-ROA
414	29-LSJ03	West	Lower San Joaquin River	9:55	265.97	11.05	35.35	0.42	5.38	Kodiak	4	10	U	LFS	1	76	n/p	n/p	None
415	29-LSJ04	West	Lower San Joaquin River	11:15	222.8	10.88	50.27	0.33	11.78	Kodiak	4	10	U	RBTC	1	224	n/p	5	AdClipped
416	29-SB01	Far West	West Suisun Bay	9:54	460.12	10.78	203.5	0.12	5.92	Kodiak	4	10	U	CHNF	1	39	n/p	3	None
417	29-SB01	Far West	West Suisun Bay	9:54	460.12	10.78	203.5	0.12	5.92	Kodiak	4	10	U	CHNW	1	102	n/p	4	None
418	29-SB01	Far West	West Suisun Bay	9:54	460.12	10.78	203.5	0.12	5.92	Kodiak	4	10	U	LFS	3	73-82	n/p	n/p	None
419	29-SB02	West	Mid Suisun Bay	11:37	243.55	10.63	191.75	0.12	6.38	Kodiak	4	10	U	LFS	3	77-79	n/p	n/p	None
420	29-SB03	Far West	West Suisun Bay	8:00	503.9	10.9	216.25	0.1	12.67	Kodiak	4	10	U	CHNW	1	137	n/p	5	None
421	29-SB03	Far West	West Suisun Bay	8:00	503.9	10.9	216.25	0.1	12.67	Kodiak	4	10	U	LFS	18	66-94	n/p	n/p	None
422	29-SB03	Far West	West Suisun Bay	8:00	503.9	10.9	216.25	0.1	12.67	Kodiak	4	10	U	RBTC	2	221-228	n/p	5	AdClipped
423	29-SB03	Far West	West Suisun Bay	8:00	503.9	10.9	216.25	0.1	12.67	Kodiak	4	10	U	RBT	1	242	n/p	5	None
424																			
425																			
426																			
427																			
428																			

Weekly Delta Smelt abundance report

Week	Stratum	Number of Sites	Number of Tows	Total Number Caught	Total Sample Volume	Abundance Index	Lower Bound	Upper Bound	Number Marked
15	All Strata	32	122	3	507,984	5,150	1,426	13,412	3
16	Western Delta	4	14	0	58,829	0*	NA	NA	0
16	Suisun Bay	6	23	0	93,456	0*	NA	NA	0
16	Suisun Marsh	3	12	0	50,121	0*	NA	NA	0
16	Lower Sacramento	4	15	0	57,026	0*	NA	NA	0
16	Cache Slough LI	3	12	0	46,169	0*	NA	NA	0
16	Sac DW Ship Channel	3	12	0	49,061	0*	NA	NA	0
16	Lower San Joaquin	6	24	0	96,154	0*	NA	NA	0
16	Southern Delta	5	20	0	82,321	0*	NA	NA	0
16	All Strata	34	132	0	533,137	0*	NA	NA	0
17	Western Delta	3	10	0	44,426	0*	NA	NA	0
17	Suisun Bay	6	24	0	108,015	0*	NA	NA	0
17	Suisun Marsh	4	14	2	60,715	6,210	707	24,209	2
17	Lower Sacramento	6	22	1	99,993	1,223	164	4,475	1
17	Cache Slough LI	3	12	0	47,374	0*	NA	NA	0
17	Sac DW Ship Channel	3	10	1	38,988	1,080	149	3,910	1
17	Lower San Joaquin	6	24	0	100,820	0*	NA	NA	0
17	Southern Delta	5	19	0	76,008	0*	NA	NA	0
17	All Strata	36	135	4	576,339	8,513	1,558	27,288	4



Week 17 (March 25 - 29, 2024)

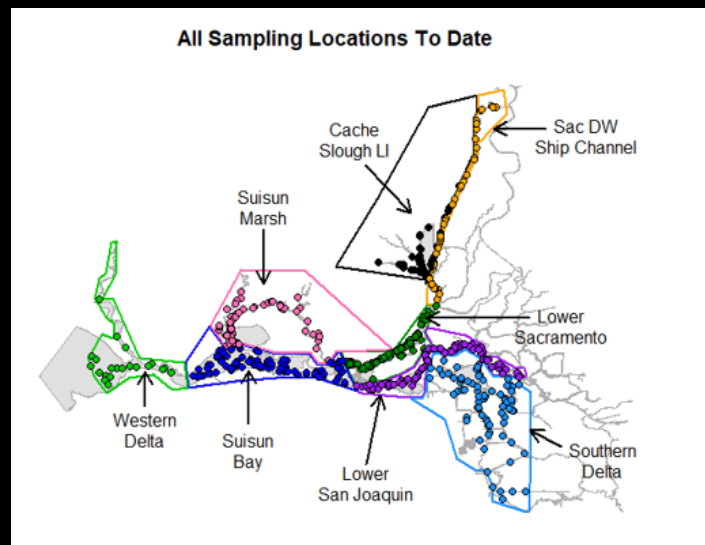
Delta Smelt Total Catch by Site

- Western Delta
- Suisun Bay
- Suisun Marsh
- Lower Sacramento
- Cache Slough LI
- Sac DW Ship Channel
- Lower San Joaquin
- Southern Delta



Total Catch

- X 0
- 1
- 2



Report generated by Lara Mitchell, USFWS

<https://www.fws.gov/media/edsm-weekly-report>

Weekly Smelt Monitoring Team report

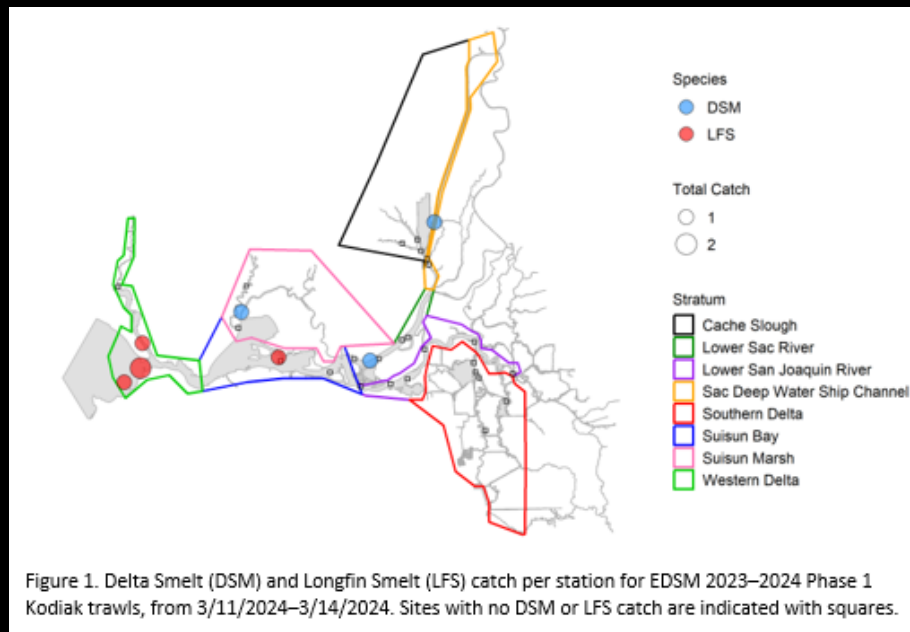
Table 1. Summary of new detections of Delta Smelt captured by the Lodi USFWS Office since the last Smelt Monitoring Team meeting.

Survey	Date	Region	Stratum	Fork Length (mm)	Mark	Disposition
EDSM	3/13/2024	West	Lower Sacramento	79	VIE-ROA	UC Davis/DOP

EDSM WY2024 Delta Smelt total: 33

Chippis Island WY2024 Delta Smelt total: 0

DJFMP E-fishing WY2024 Delta Smelt total: 1



Bay Delta Live

baydeltalive.com/fish/edsdm-maps-and-data

DRUPAL MeetingNotes EDSDM EDI data chec... R for Reproducible... Djfmp Web Welcom... Crew Schedule 2024... Introduction to Geo... Statistics and Evid... GlobalProtect - Ho... Cal Neva American... EDSDM Database Im... Online Learning | Th...

Home Operations Current Conditions Weather Fish Explore Data Maps Docs Help

Q

EDSDM Previous Week Total Catch



Data Collected: 02/06/2024 - 02/13/2024, [NS] - Not Sampled

Data Sources

ENHANCED DELTA SMELT MONITORING (USFWS)

Year Initiated: 2016
Sampling Season: Year Round
Survey Length:
Each Survey Takes 4 Days to Complete
Survey Frequency: Weekly

Number of Stations: Randomly Generated Stations
Gear Type: Kodiak Net and 20 MM Net
Tow Information: 2-4 10 minute tows at each location



The Enhanced Delta Smelt Monitoring (EDSM) is a year-round monitoring program focused on sampling Delta Smelt at nearly all life stages. The high frequency sampling conducted by the USFWS provides estimates of abundance, distribution, and, when sufficient data is available, risk of entrainment. From July through March, Kodiak trawling is conducted to collect juvenile through adult life stages. This data is reported in close to real time in the map to the right and table below. From April-June, EDSM conducts larval sampling. This data is not directly linked to Bay-Delta Live. Learn more about the larval sampling and how to access data via the [Lod FWS website](#).

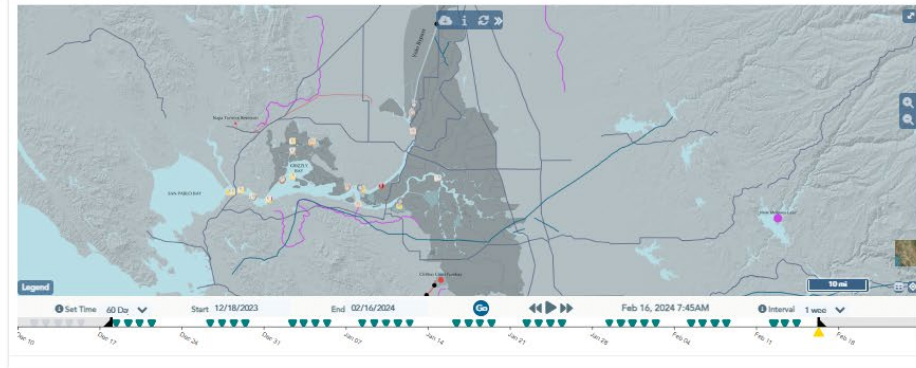
EDSDM Catch Snapshot



Data Collected: 02/14/24, [NS] - Not Sampled

Data Sources

The EDSM Monitoring Program Data is maintained by the U.S. Fish and Wildlife Service through the Lod Fish and Wildlife Office. To learn more about the program please visit the [U.S. Fish and Wildlife Service website](#). Monitoring data is delivered via web services.



MAP ATTRIBUTE TABLE USE ABOVE TIMELINE TO VIEW WEEKLY SUMMARIES AND REFRESH ATTRIBUTE TABLE

EDSDM Weekly Summary

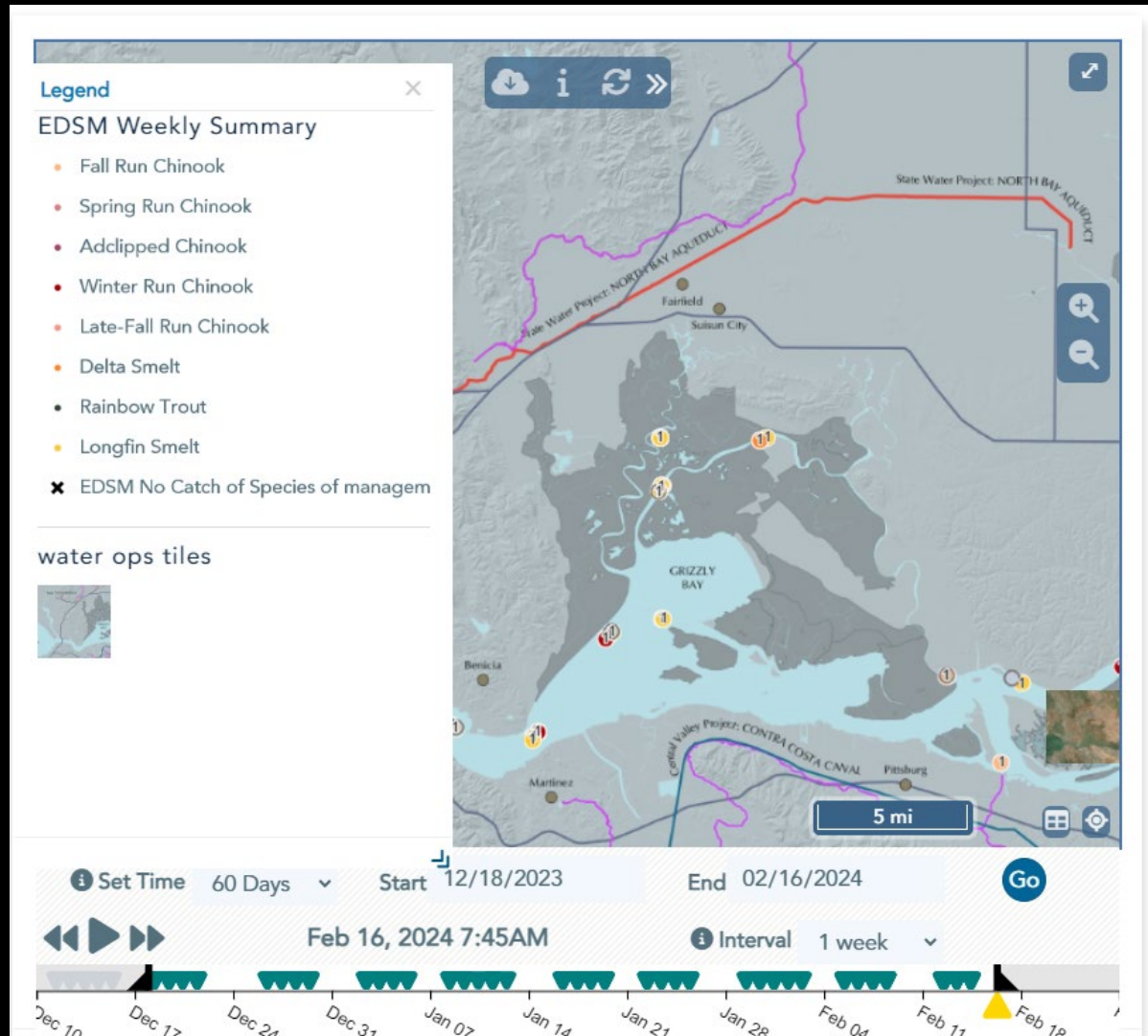
Filter by Text

Row Count: 100

Page 1 of 2

ID	Station	Station	Region	Sub-Region	Anglic	AnglicAlt	AngTemp_C	AngF	Method	NetType	TrawlDepth	TrawlDepth	Species	Mark	Catch	Percentage	Stage	Ex
1	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
2	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
3	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
4	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
5	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
6	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
7	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
8	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
9	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
10	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
11	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
12	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
13	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
14	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
15	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
16	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
17	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
18	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
19	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
20	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
21	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
22	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
23	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
24	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
25	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
26	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
27	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
28	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
29	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
30	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
31	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
32	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
33	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
34	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
35	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
36	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
37	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
38	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
39	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
40	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
41	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
42	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
43	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
44	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
45	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
46	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
47	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
48	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
49	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
50	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
51	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
52	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
53	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
54	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
55	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
56	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
57	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
58	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
59	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
60	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
61	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
62	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
63	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
64	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
65	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
66	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
67	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
68	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
69	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
70	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
71	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
72	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
73	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
74	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
75	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
76	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
77	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
78	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
79	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4	10	U	MDS	None	1	36.0	2	ns
80	San Diego Water	24-29-02-01	North	Lower San Diego River Ship Channel	276.6	0.2	10.1	108	105M	4								

Bay Delta Live



SacPAS

Smelt Monitoring WY2024

Monitoring	Species	Mark Code	First Date	Last Date	nfish
Chippis Island Trawl	Longfin Smelt	All Catch	2023-10-02	2024-03-20	148
EDSM	Delta Smelt	All Catch	2023-10-05	2024-03-26	37
EDSM	Longfin Smelt	All Catch	2023-10-02	2024-03-20	1856

Smelt Monitoring Last 2 Weeks

Monitoring	Species	Mark Code	First Date	Last Date	nfish
Chippis Island Trawl	Longfin Smelt	All Catch	2024-03-20	2024-03-20	1
EDSM	Delta Smelt	All Catch	2024-03-25	2024-03-26	4
EDSM	Delta Smelt	VIE-LOP	2024-03-25	2024-03-25	3
EDSM	Delta Smelt	VIE-RBA	2024-03-26	2024-03-26	1
EDSM	Longfin Smelt	All Catch	2024-03-20	2024-03-20	2

EDSM WY 2024 (10/01/2023 - 09/30/2024)

Delta Smelt and Longfin Smelt caught in Enhanced Delta Smelt Monitoring (EDSM)

Sample Date Time	Species	Mark Code	nfish	Fork Length (mm)	Subregion	Stratum	Region	Method	Source
2023-10-05 10:24:00	Delta Smelt	None	1	60	Sacramento River near Rio Vista	Lower Sacramento	North	Kodiak Trawl	EDSM Provisional, USFWS Lodi
2023-10-24 12:24:00	Delta Smelt	None	1	53	Lower Sacramento River	Lower Sacramento	West	Kodiak Trawl	EDSM Provisional, USFWS Lodi
2023-11-15 09:17:00	Delta Smelt	None	1	57	Lower Sacramento River	Lower Sacramento	West	Kodiak Trawl	EDSM Provisional, USFWS Lodi
2023-12-07 10:00:00	Delta Smelt	VIE-LGA	1	63	Lower Sacramento River	Lower Sacramento	West	Kodiak Trawl	EDSM Provisional, USFWS Lodi
2024-01-16 10:50:00	Delta Smelt	AdClipped	1	63	Lower Sacramento River	Lower Sacramento	West	Kodiak Trawl	EDSM Provisional, USFWS Lodi

https://www.cbr.washington.edu/sacramento/workgroups/delta_smelt.html

Environmental Data Initiative (EDI)

Data Package Summary [View Full Metadata](#)

Title: Interagency Ecological Program and US Fish and Wildlife Service: San Francisco Estuary Enhanced Delta Smelt Monitoring Program data, 2016-2023

Creators: United States Fish and Wildlife Service
Erly, Kate; United States Fish and Wildlife Service
Cook, Ryan; United States Fish and Wildlife Service...

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Publication Date: 2023-12-21

Citation: United States Fish and Wildlife Service, K. Erly, R. Cook, J. Speegle, G. Bigham, D. Supervisory Fish Biologist, and T. Senegal. 2023. Interagency Ecological Program and US Fish and Wildlife Service: San Francisco Estuary Enhanced Delta Smelt Monitoring Program data, 2016-2023 ver 10. Environmental Data Initiative.
<https://doi.org/10.6073/pasta/dc09bc11182f998e9902fb9e2d5d6e5a> (Accessed 2024-04-03).

[Copy Citation](#)

Abstract: The Enhanced Delta Smelt Monitoring Program (EDSM) was initiated by the U.S. Fish and Wildlife Service in 2016. EDSM focuses on providing real-time data to help managers respond to population patterns of Delta Smelt within the upper San Francisco Estuary, primarily by providing estimates of Delta Smelt distribution and abundance. The...

Resources: [View Full Metadata \(245 views\)](#)
[View Quality Report](#)

[Full Data Package \(Zip\)](#) (5 downloads)

Data Entities:

1. EDSM_20mm.csv (15.1 MiB; 29 downloads)

[Download](#)

[Explore Data](#)

2. EDSM_KDTR.csv (54.5 MiB; 34 downloads)

[Download](#)

[Explore Data](#)

3. EDSM_Fish_Taxonomy.csv (21.7 KiB; 13 downloads)

[Download](#)

[Explore Data](#)

4. ChangeLog.csv (2.7 KiB; 9 downloads)

[Download](#)

<https://portal.edirepository.org/nis/mapbrowse?packageid=edi.415.10>

Integrated datasets

- Delta Smelt supplementation team
- Directed Outflow Project (DOP):

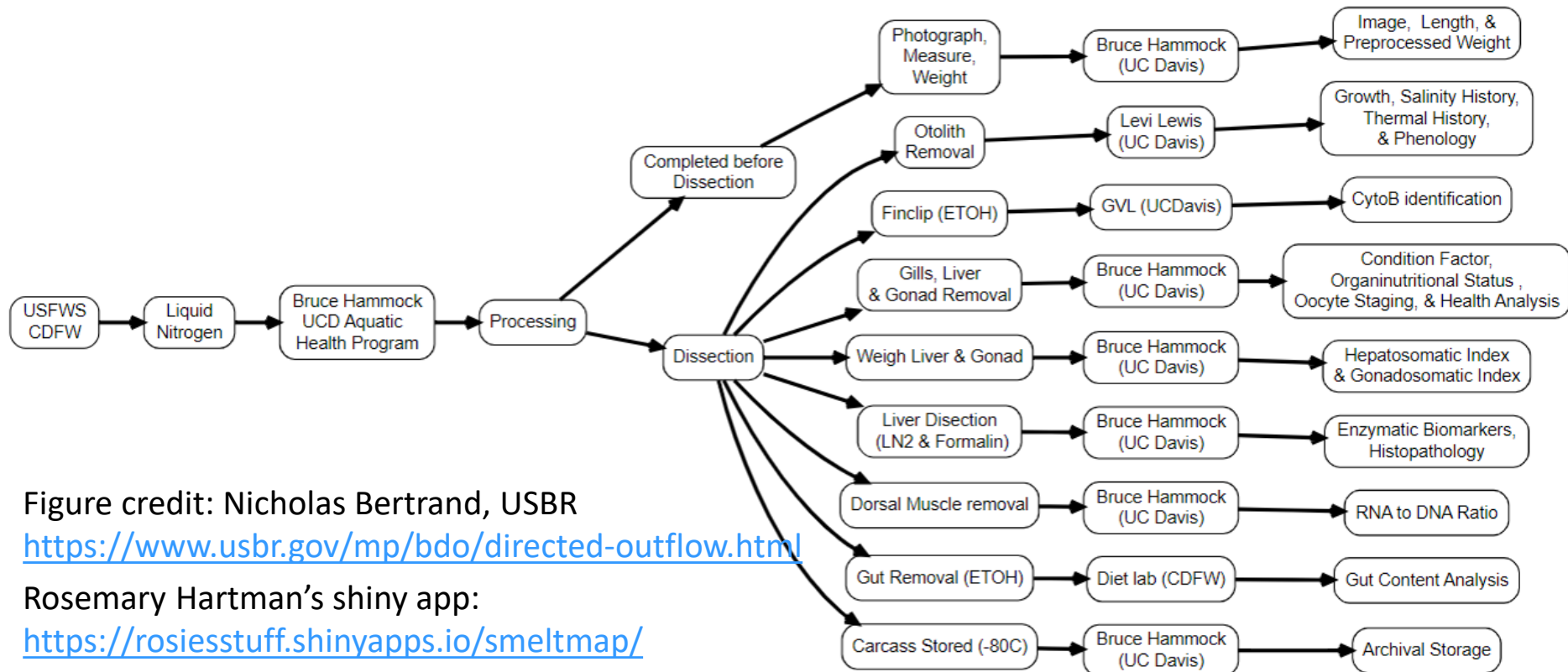


Figure credit: Nicholas Bertrand, USBR

<https://www.usbr.gov/mp/bdo/directed-outflow.html>

Rosemary Hartman's shiny app:

<https://rosiesstuff.shinyapps.io/smeltmap/>

Looking back, looking ahead

- Real-time reporting is resource intensive
- Better efficiency -> more data
 - Automate where possible
 - Reuse reports where possible
 - Electronic field entry
- Integrate datasets earlier

Acknowledgements

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- Thank you to all LFWO staff and field crew, past and present
- For more information or questions, email denise_goodman@fws.gov

