



Janna Rinderneck
Staff Environmental Scientist

Angie Montalvo
Environmental Scientist



Responding to and Reporting Fish Kills and Spills

The Problem

- Recent questions about investigating seasonal fish kills.
- To whom should field crews report pollution or observed fish kills?
 - Pollution = Habitat loss
 - Time sensitive



DFG Spill Response Topics

- About DFG-OSPR resources for spill response and fish kills
- Fish Kill and Spill reporting procedures
 - Reporting, processing and dispatch
- Bioassessments for pollution investigations
- Questions

Field crew situations:

- Fish kill
- Oiled wildlife
- Oil “surface expressions”





FISH AND GAME CODE

SECTION 5650 (a)

Except as provided in subdivision (b), it is unlawful to deposit in, permit to pass into, or place where it can pass into the waters of this state any of the following:

(1-5) covers specific substances, or

(6) Any substance or material **deleterious** to fish, plant life, bird life or mammals.

(b) This section does not apply to a discharge or a release that is expressly authorized pursuant to, and in compliance with, the terms and conditions of a waste discharge requirement... or a waiver issued pursuant to ...the Water Code issued by the State Water Resources Control Board or a regional water quality control board...

A “deleterious substance” could be...



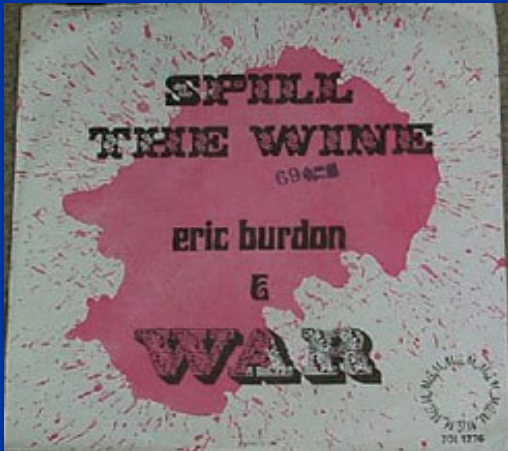
...Soil run-off



Whatever they
are making....



Sewage...



...Wine



Cow poop...

“The dose makes the poison”

Paracelsus

§5650 Pollutants



SPRR – 1991

Sacramento River near Dunsmuir



Other common pollutants:

Fertilizer & Pesticides

“Produced Water”

Concrete

Background: DFG's Unique Abilities

- State Peace Officer
- Unique Search Authority
- Specialized Training



Background: DFG's Unique Abilities

- Scientific Staff
- Laboratory Assets
- Restoration Experts



Response

- **Field Response Team**
- **Incident Command System**



- **Technology**
- **Laboratories**
- **Oiled Wildlife Care Network**



OSPR Field Response Team



**Environmental
Scientist**



**Oil Spill
Prevention
Specialist**



Warden

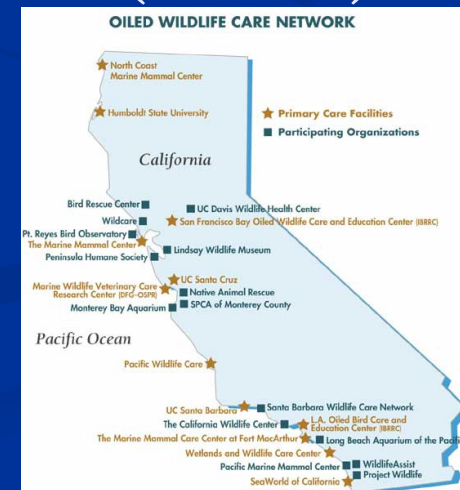
Wildlife Response Operations



- Network of trained rehab groups
 - ▶ >30 member organizations
 - ▶ 12 primary care facilities

www.owcn.org

Oiled Wildlife Care Network (OWCN)



Wildlife Rehabilitation

- <http://www.ccwr.org/index.html>
- (415) 541-5090



Pacific Pipeline Break March 2005
142,000 gals oil to Posey Cyn/Pyramid Lake
Bushtit nest was collateral damage



Laboratories



- Petroleum Chemistry Lab
- Water Pollution Control Lab

- Aquatic Bioassessment Lab
- Fish Health Lab
- Wildlife Investigations Lab



ABL has moved....



**CA Dept. of Fish and Game - OSPR
Aquatic Bioassessment Laboratory - ABL
9300 Elk Grove Florin Road
Elk Grove, CA 95624-1610
916.685.5308 (Angie Montalvo)
916.685.8298 (Doug Post)
916.685.1880 (Nathan Mack)
Lab Fax: 916.714.9178**

Services of Fish Health Lab



- Diagnose Fish Diseases, Recommend Therapy
- Certify CA Fish for Disease and Health Status
- Monitor Spawning Fish for Pathogens
- Inspect Fish for In-State movement
- Confirm Fish Disease Certifications from other States
- Inspect Fish Imported from Other States
- Survey Wild Fish for Diseases
- Provide Scientific Support for Experiments etc.



Fish Health Laboratory

- Fish kills may be due to disease
- Fish pathologist notification
- Field or lab support (contact lab for proper sample procedures)
- Early identification of serious fish-diseases that may enter California is critical (regardless of species impacted)

CA DFG Fish Health Laboratory

Freshwater- All Trout and Salmon Hatcheries

- Mark Adkison, Ph.D., Senior Pathologist (Sup)
- Mark Clifford, Ph.D., Associate Pathologist
- Garry Kelley, Ph.D., Associate Pathologist
- Joe Maret, DVM, Senior Pathologist
- Kavery Mukkatira, Laboratory Technician II
- Tresa Veek, Associate Pathologist

General Line: (916) 358-2822

Mark Adkison: (916) 358-2830



Signs of Fish Diseases

Behavioral

- Flashing
- Going off feed
- Excitability
- Listlessness (lazy swimming)
- Riding High
- Piping (breathing at surface)
- Swimming at sides
- Swimming in circles
- Sticking to screens (duh!)

External

- Darkening
- Increased Mucus
- Hemorrhaging (bleeding)
- Popeye (exophthalmia)
- Erosion (fins etc.)
- Ulceration (open sores)
- Deformities
- Abdominal Swelling
- Flared Opercula



There Are Many Types of Fish Diseases-

Infectious
Environmental
Nutritional
Genetic
Traumatic etc.



Fish Health Lab Deals Mostly with Infectious Diseases-

Bacterial
Fungal
Parasitic
Viral



Spill or Fish Kill Notification

- California Emergency Management Agency
 - (Cal-EMA)
- Hazardous Materials Spill Report





GOVERNOR'S OFFICE OF
EMERGENCY SERVICES
Hazardous Materials Spill Report

DATE: 06/09/2008 TIME: 0906	RECEIVED BY: OES - Ruben Rodriguez OSPR -	CONTROL #: 08-4098 NRC -
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1.a. PERSON NOTIFYING GOVERNOR'S OES:

1. NAME:	2. AGENCY:	3. PHONE #:	4. EXT:	5. PAG/CELL:
Mike Arias	Aera Energy	661-343-6581		661-665-4283

1.b. PERSON REPORTING SPILL (If different from above):

1. NAME:	2. AGENCY:	3. PHONE#:	4. EXT:	5. PAG/CELL:
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2. SUBSTANCE TYPE:

2. a. SUBSTANCE:	b. QTY: >=<	Amount	Measure	c. TYPE:	d. OTHER:
1. Oil / Water Mix	=	1000 Bbls.	/ Bbl (s) per day	PETROLEUM	

2.	=
3.	=
4.	=

e. DESCRIPTION: A casing leak at a well head is the cause of this on-going release. Caller states the release has been on-going since Friday at the rate of 1000 Barrels per day. Caller states a bell hole has been dug which is containing the release, with VAC trucks on site to pump the bell hole. Caller states the release has been completely contained on site, no water impact.

f. CONTAINED:	g. WATER INVOLVED:	h. WATERWAY:	i. DRINKING WATER IMPACTED
No	No		

3. a. INCIDENT LOCATION: Well # 511 N3-1 North. Section 1 North, Township 28 South, Range 20 East

b. CITY:	c. COUNTY:	d. ZIP:
McKittrick	Kern County	93251

4. INCIDENT DESCRIPTION:

a. DATE:	b. TIME (Military):	c. SITE:
06/06/2008	0800	Oil Field

d. INJURIES #:	e. FATALS #:	f. EVACS #:	g. CLEANUP BY:
0	0	0	Contractor

5. RESPONSIBLE PARTY:

a. NAME:	b. AGENCY:	c. PHONE #:	d. EXT.:
Mike Arias	Aera Energy	661-343-6581	

e. MAIL ADDRESS:	f. CITY:	g. STATE:	h. ZIP:
59231 Main Camp Rd	McKittrick	CA	93251

6. NOTIFICATION INFORMATION:

a. ON SCENE:	b. OTHER ON SCENE:
c. OTHER NOTIFIED:	d. ADMIN. AGENCY:
e. SEC. AGENCY:	Kern Co. Environmental Health Services Dept

f. NOTIFICATION LIST:

DOG Unit:	4	RWQCB Unit:	5C		
<input checked="" type="checkbox"/> AACUFA	<input checked="" type="checkbox"/> DFG-OSPR	<input type="checkbox"/> EMSA	<input type="checkbox"/> OES PLANS UNIT	<input checked="" type="checkbox"/> RWQCB	<input checked="" type="checkbox"/> USFWS
<input type="checkbox"/> AIR RESOURCES BD	<input type="checkbox"/> DHS-D.O.	<input type="checkbox"/> FEMA	<input type="checkbox"/> OES REG	<input type="checkbox"/> SFM	<input type="checkbox"/> OTHER
<input type="checkbox"/> CALTRANS	<input checked="" type="checkbox"/> DOG	<input type="checkbox"/> FOOD & AG	<input type="checkbox"/> OSHA	<input checked="" type="checkbox"/> US EPA	
<input type="checkbox"/> CDF	<input checked="" type="checkbox"/> DTSC	<input type="checkbox"/> LANDS	<input type="checkbox"/> PARKS & REC	<input type="checkbox"/> USMMS	
<input type="checkbox"/> COASTAL COM	<input type="checkbox"/> EB PARKS	<input type="checkbox"/> OES HAZMAT UNIT	<input type="checkbox"/> PUC	<input type="checkbox"/> USCG	



CALIFORNIA EMERGENCY MANAGEMENT AGENCY
EMERGENCY SERVICES
Hazardous Materials Spill Report

DATE: 10/28/2011 TIME: 1558	RECEIVED BY: CalEMA - Dana Kay OSPR -	CONTROL #: CalEMA -11-6454 NRC -
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1.a. PERSON NOTIFYING GOVERNOR'S CalEMA:

1. NAME:	2. AGENCY:	3. PHONE #:	4. EXT:	5. PAG/CELL:
Roth Rodriguez	City of San Jose	408-398-9295		

1.b. PERSON REPORTING SPILL (If different from above):

1. NAME:	2. AGENCY:	3. PHONE#:	4. EXT:	5. PAG/CELL:
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2. SUBSTANCE TYPE:

2. a. SUBSTANCE:	b.QTY: >=<	Amount	Measure	c. TYPE:	d. OTHER:
1. Chlorine Bleach	=	Unk	Unknown	CHEMICAL	
2.	=				
3.	=				
4.	=				

e. DESCRIPTION: For unknown reasons a release of Chlorine Bleach is entering a storm line and which released into Coyote Creek. It is currently unknown where the originating point of the chemical is. Surface inspections are occurring at this time. The Department of Conservation is currently blocking the line and diverting it into the sanitation line. It is unknown how much of the release actually entered the creek. Near the outflow is where most of the substance ponded, killing hundreds of crayfish and a lesser amount of other small fish (minnows) in the creek. Another group crayfish and small fish were located dead further down stream. Water samples are being taken at this time.

f. CONTAINED:	g. WATER INVOLVED:	h. WATERWAY:	i. DRINKING WATER IMPACTED
Unknown	Yes	Coyote Creek	No

j. KNOWN IMPACT

3. a. INCIDENT LOCATION:	Roberts Ave at Oswego Dr - Outflow number 133	
b. CITY:	c. COUNTY:	d. ZIP:
San Jose	Santa Clara County	

4. INCIDENT DESCRIPTION:

a. DATE:	b. TIME (Military):	c. SITE:	d. CAUSE
10/28/2011	1100	Other	Unknown
e. INJURIES #:	f. FATALS #:	g. EVACS #:	h. CLEANUP BY:
			Dept of Conservation

5. RESPONSIBLE PARTY:

a. NAME:	b. AGENCY:	c. PHONE #:	d. EXT.:
Roth Rodriguez	City of San Jose	408-398-9295	
e. MAIL ADDRESS:	f. CITY:	g. STATE:	h. ZIP:
200 East Santa Clara St, 7th Floor	San Jose	CA	95113

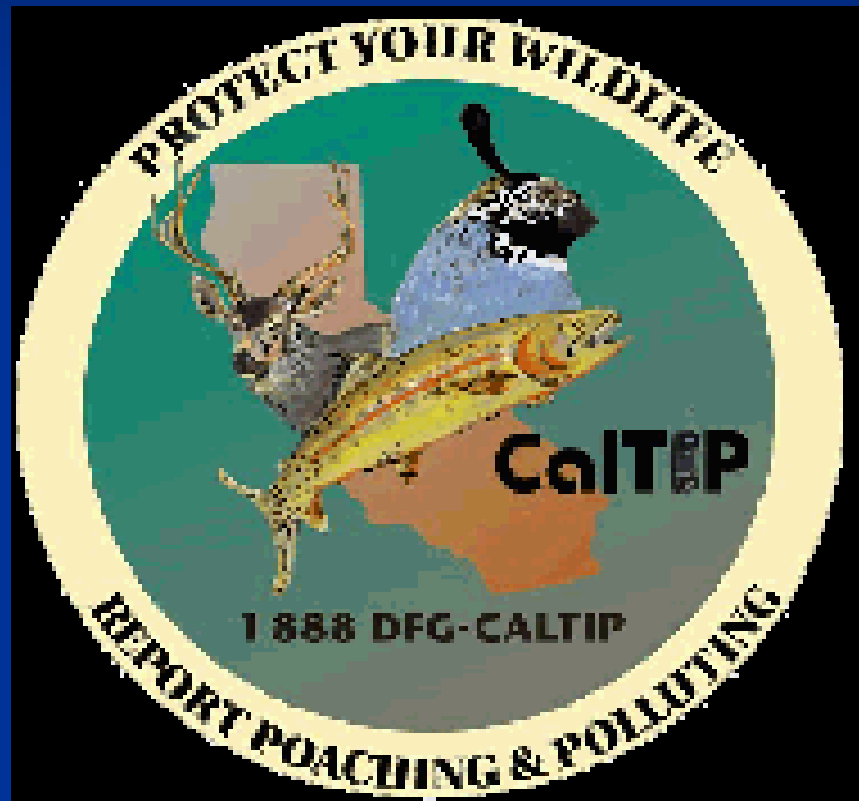
6. NOTIFICATION INFORMATION:

Spill with a
fish kill

Dispatching Office

- OSPR Dispatch (Monday through Friday
0800-1600)
- Department of State Parks Communication Centers
(NORCOM/CENCOM/SURCOM 24 hrs/7 day)

Cal-TIP
Californians Turn in Poachers and Polluters
1 888 DFG-CALTIP(888 334-2258)



Requested Information

What

Where

When

Why

Who



Resources



- CalEMA guidebooks
- DFG/OSPR Spill Reporting Information
- DFG regional maps and phone numbers
 - Can access local biologists





Kinder Morgan Energy Partners
5650 Violation/ Diesel Spill
Donner Summit/ Summit Creek
Response Monitoring Spring/Summer 2005
Recovery Monitoring 2006 thru 2009

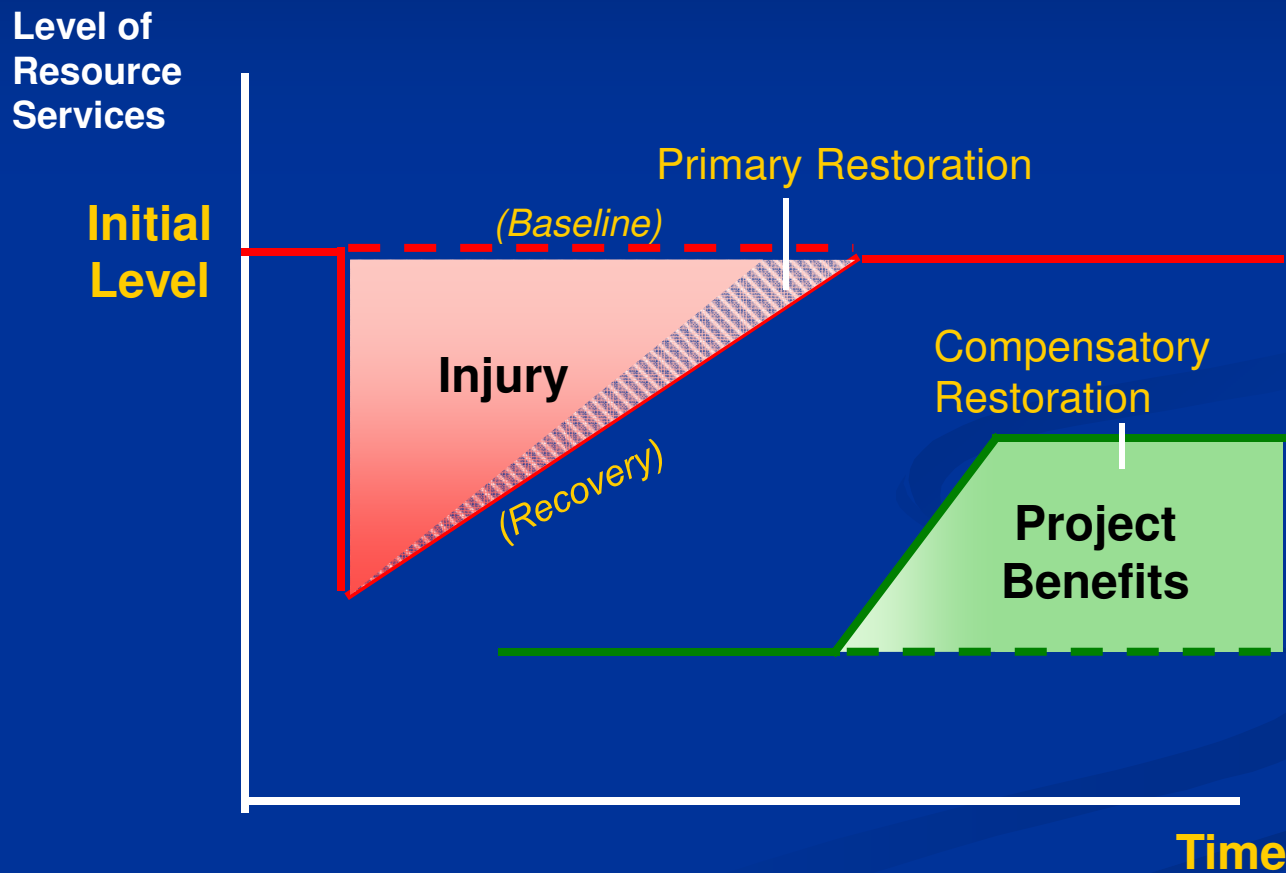
BIOASSESSMENT AS AN ENFORCEMENT TOOL

Why use Bioassessment?

- *Cost-effective tool (especially mini BMIs)*
- *Targeted and multi-habitat approach (riffle, run and pool)*
- *No holding time requirement for samples*
- *Unlike fish, benthos cannot move around as much so they are less able to escape the effects of sediment and other pollutants that diminish water quality. Therefore, benthos can give us reliable information on lotic and lentic water quality.*
- *Benthos represents an extremely diverse group of aquatic animals, and the large number of species possess a wide range of responses to stressors such as organic pollutants, sediments, and toxicants (TV).*
- *Many BMI are long-lived, allowing detection of past pollution events such as pesticide spills and illegal dumping.*



ASSESSING NATURAL RESOURCE INJURIES



Compensation for lost resources





Shea Homes Construction
1600/5650 Violations/ Sediment Discharges
Las Virgenes Creek, Los Angeles County
Spring 2004 thru Winter 2005



**Barr Property
1600/5650 Violations/ Sediment Discharges
Dry Creek, Mendocino County
Fall 2005 thru Spring 2006**



Sabastiani Winery
5650 Violation/ Fish kill/ Wine Waste Discharge
Nathanson Creek, Sonoma County
September thru Fall 2010

18th ANNUAL MEETING OF THE CALIFORNIA AQUATIC BIOASSESSMENT WORKGROUP

Spills, Fish Kills and How to Work with DFG for Water Quality Issues

Thanks for listening...



Angie Montalvo
Environmental Scientist
CDFG-OSPR-ABL
amontalv@ospr.dfg.ca.gov
Office: 916.685.5308
Cell: 916.202.6713

Janna Rinderneck
Staff Environmental Scientist
CDFG-OSPR
jrinder@ospr.dfg.ca.gov
Office: 916.341.6971
Cell: 916.826.9729