



Prepared & Professional

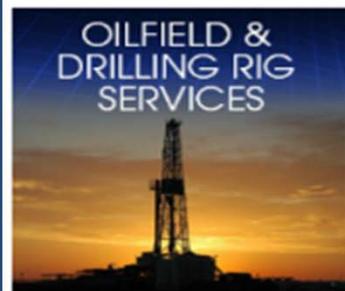
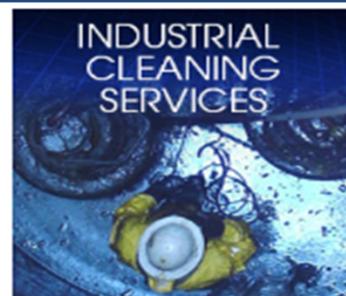
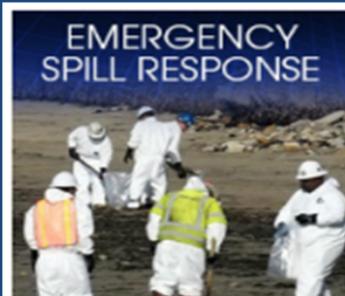


Services



Patriot provides a full range of vertically-integrated environmental services and solutions.

- ✓ Single source to insure environmental project completion
- ✓ Unlimited scope, size, or complexity



Inland Response Health and Safety Aspects



- Health and Safety Aspects – Same general 10-subject OSHA required H&S topics to cover an uncontrolled hazardous waste site (i.e. spill exclusion zones), with additional special safety messages not typically associated with marine spills :
 - Trench / Culvert Operating Environments
 - Distracted / Defensive Driving Awareness
 - Elevated Work / Fall Protection
 - Sustained Rain / Mudslide Awareness
 - Swiftwater / Rising or Dropping Water Awareness
 - Heat Stress / Cold Stress
 - Lyme Disease
 - Poison Oak / Poison Ivy / Poison Sumac
 - Mountain Lion / Bear / Other Large Mammal Awareness
 - Rattlesnake / Other poisonous and Non-Poisonous Snake Awareness
 - Stinging and Biting Insects
 - Sustained Night Operations
 - Public Health Concerns



Zero Accidents, Period.

Inland Response Strategy Training and Preparation



- Training on Specialized Equipment
 - New Equipment Purchase
 - Specialized Equipment Subcontractor Network
 - Establishing Additional Pre-Staging Locations
 - Establishing New Customer Relationships and Familiarity
-























Facility Locations

Patriot currently has facilities throughout California and is moving into neighboring states with near-term plans to expand into other regions of the U.S. Our current facilities include:

- Long Beach (Wilmington) – Headquarters
- Bakersfield (two Locations)
- Fresno
- Las Vegas, NV
- Ontario
- Orange (Patriot WasteWater)
- Phoenix, AZ (two locations)
- Richmond (two locations)
- Sacramento
- San Diego
- Santa Clarita
- Ventura



Office Locations



Regulatory Compliance



- Additional Inland Response Ratings in Newly Established Response Planning Areas (RPA's)
- Marine 2, 4, 6, 12, 24 vs. Inland and Inland On-Water 6, 12, 24 Hour Response Framework
- SCAQMD Rule 1166 Compliance

Equipment Arrival Times	Within 6 hours	Within 12 hours	Within 24 hours
Containment of the Spill	10%	50%	100%
Minimum Oil Recovery Capability (Whichever is the Lesser)	820 bbls, or Sufficient on-water or terrestrial Response Resources to respond to 50% of the RWCS	4,100 bbls or 75% of the RWCS	8,214 bbls, or Sufficient on-water or terrestrial Response Resources to respond to the remaining 25% of the RWCS

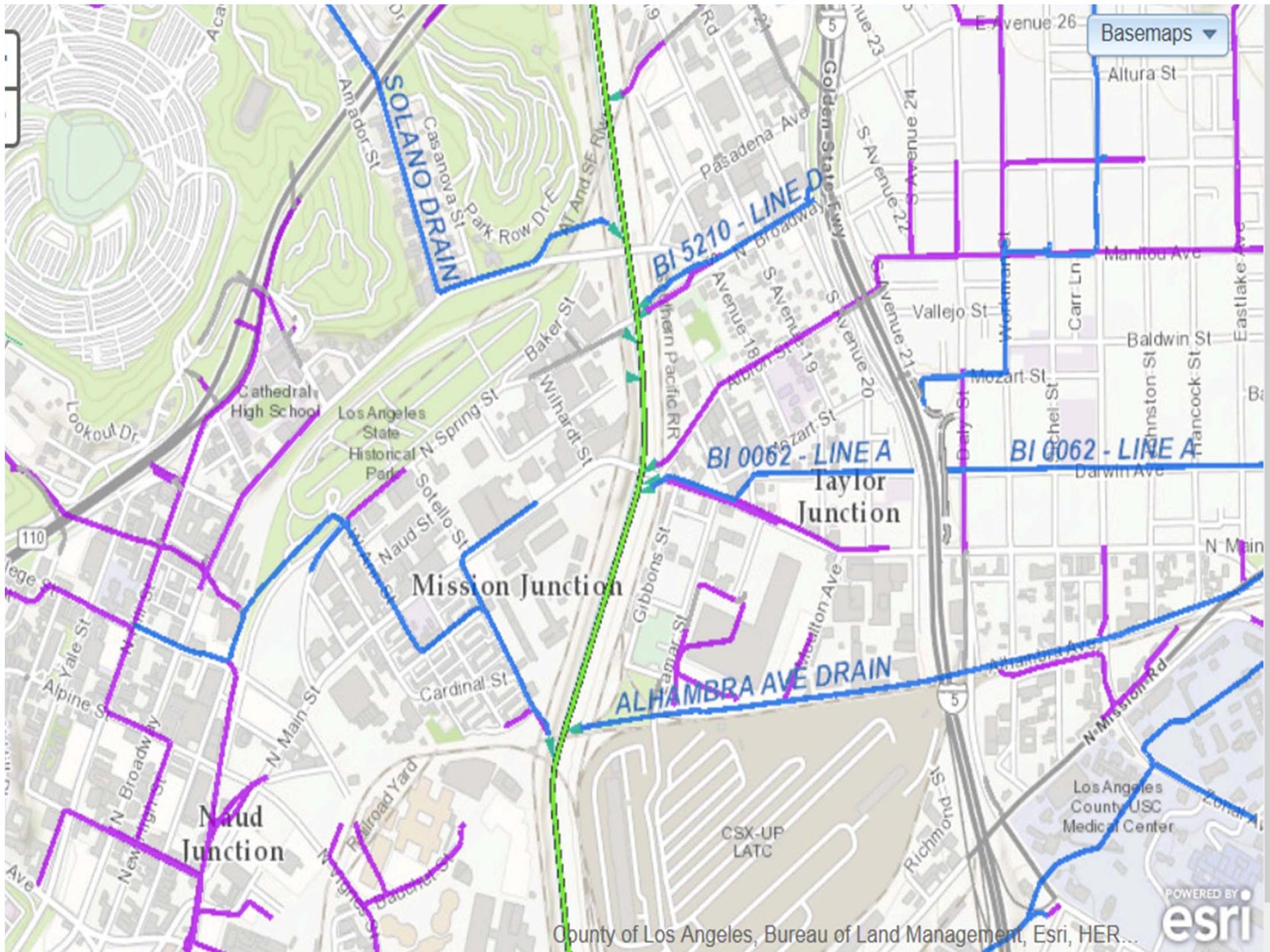




Implementing Response & Cleanup Techniques



- Emphasis on Responding to the Leading Edge vs. to the Source Location (Especially in Urban and Suburban Storm Drain Systems)
 - Choices: Use Typical Water Environment Response Resources; Use Construction Equipment and Surrounding Soil or Combination Thereof
 - NOAA / API / SCAA: Guidelines for Minimizing Environmental Impacts of Freshwater Spill Response – Broken Down by: Habitat Type, Petroleum Type (Gasolines, Diesels, Medium Oils and Heavy Oils) and Response Strategies
 - Class V or Sinking Petroleum Products
 - Ice and/or Snow
 - Moving or Swiftwater Environments – Cross-River Trolley, Boom Vanes & Current Buster, Boom Angles and Anchors
 - Impacts Associated With Cleanup Techniques
 - More Potential for Impact to Sensitive or Critical Habitats, Waterfowl Nesting Areas or Flyways, and Threatened and/or Endangered Species
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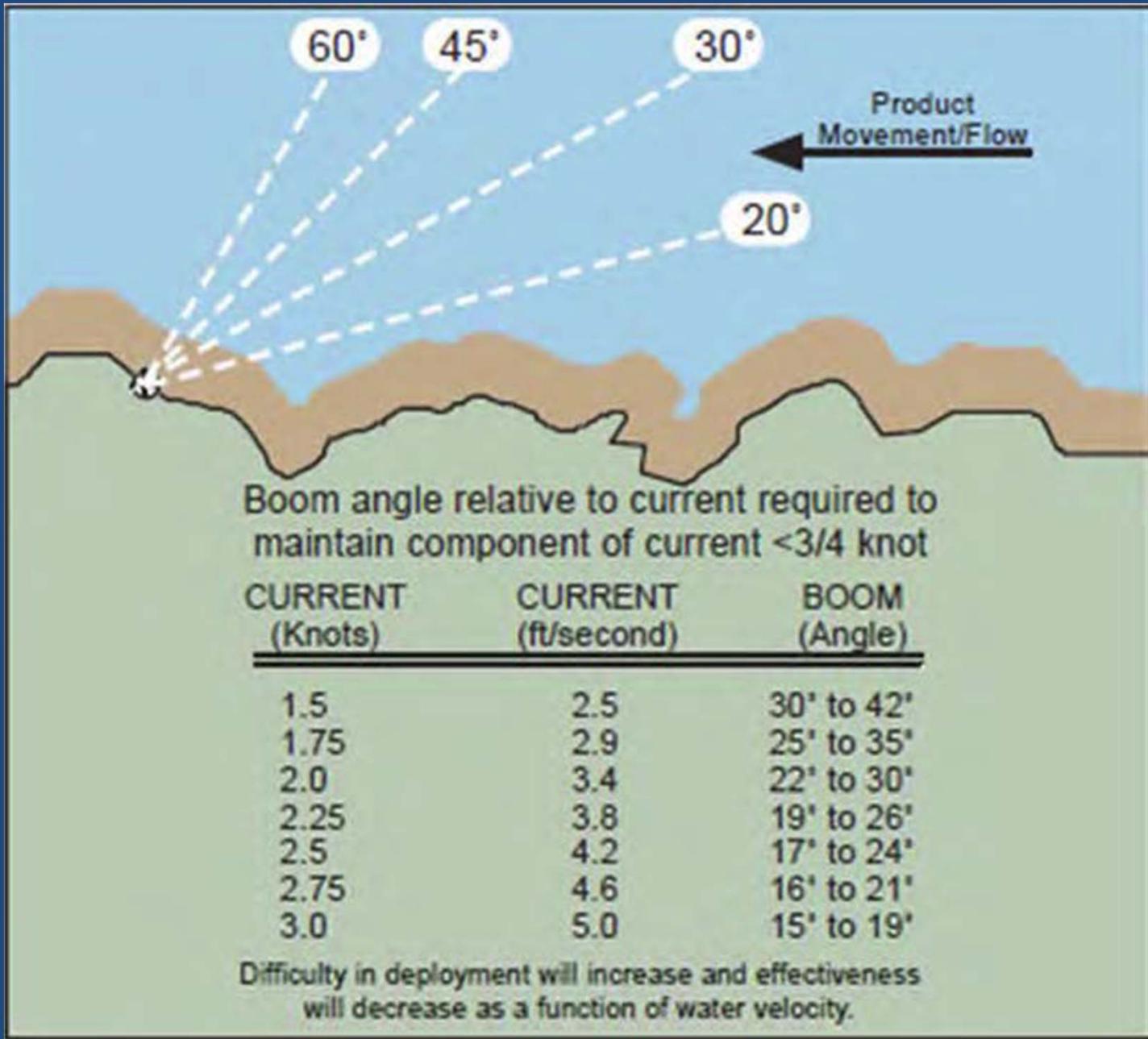


Table 9. DIESEL-LIKE OILS: Summary of relative environmental impact from response methods on shoreline habitats.

Response Method	SHORELINE HABITAT							
	Bedrock	Man-Made	Sand	Vegetated Shores	Sand and Gravel	Gravel	Mud	Wetlands
PHYSICAL RESPONSE METHODS	1,2,8*	1,8	3,4	9	5	6	7,9	10
Natural Recovery	A	A	A	A	A	A	A	A
Booming	-	-	-	-	-	-	-	-
Skimming	-	-	-	-	-	-	-	-
Barriers/Berms	-	-	-	-	-	-	-	-
Physical Herding	-	-	-	-	-	-	-	-
Manual Oil Removal/Cleaning	B	A	B	B	B	B	D	D
Mechanical Oil Removal	-	-	B	C	C	D	D	D
Sorbents	A	A	A	A	A	A	A	A
Vacuum	B	B	B	B	B	B	C	B
Debris Removal	A	A	A	B	A	A	B	B
Sediment Reworking	-	-	B	D	B	B	D	D
Vegetation Removal	-	-	-	B	-	-	-	C
In-Situ Burning	B	B	-	B	-	-	C	B
Flooding	A	A	A	A	A	A	A	A
Low-Pressure, Cold-Water Flushing	A	A	B	A	A	A	C	A
High-Pressure, Cold-Water Flushing	B	A	D	C	C	B	D	D
Low-Pressure, Hot-Water Flushing	C	B	C	D	C	C	D	D
High-Pressure, Hot-Water Flushing	D	B	D	D	D	D	D	D
Steam Cleaning	D	C	-	-	D	D	-	-
Sand Blasting	D	C	-	-	-	-	-	-
CHEMICAL RESPONSE METHODS								
Dispersants	-	-	-	-	-	-	-	-
Emulsion Treating Agents	-	-	-	-	-	-	-	-
Visco-Elastic Agents	-	-	-	-	-	-	-	-
Herding Agents	-	-	-	-	-	-	-	-
Solidifiers	B	B	B	D	-	-	D	D
Chemical Shoreline Pretreatment	I	I	I	I	I	I	I	I
Shoreline Cleaning Agents	-	B	-	I	-	-	D	I
BIOLOGICAL RESPONSE METHODS								
Nutrient Enrichment	C	C	B	B	B	B	I	I
Natural Microbe Seeding	I	I	I	I	I	I	I	I

*Key to ESI codes in Table 5 on page 12.

The following categories are used to compare the relative environmental impact of each response method for

each habitat for each oil type, using the following definitions:

A = May cause the least adverse habitat impact.

B = May cause some adverse habitat impact.

C = May cause significant adverse habitat impact.

D = May cause severe adverse habitat impact.

- = May cause minimal adverse habitat impact.





GRP's vs. ACP's



- GRP's that have been established, Strategies are Suggestions
- On-going Production of New GRP's by New Plan Holders and LEPC's comprised of industry representatives, federal, State, and local government agencies, public health agencies, tribal representatives and other stakeholders.
- ACP Strategies are established for Sensitive Sites along the entire CA coastline
- GRP strategies have only been established for:
 - Upper Sacramento River from Dunsmuir to Red Bluff
 - Lake Tahoe/Truckee River and other creeks in the vicinity (Plus NV)
 - East and West Walker River in Mono County (Plus NV)
 - Lower Colorado River from Hoover Dam to the Mexican Border
 - Carson River in Alpine County (Plus NV)
 - (Draft) UPRR portions of the North and Middle Forks of the Feather River in Butte and Plumas Counties

Communications

- Many Remote Areas Require Radio and/or Radio-Repeater Use, Especially in Mountainous Terrain Vehicle Enabled Repeaters Sometimes Required
- Spare/Reserve Batteries and Charging Stations
- “Forward” Command Center Dedicated to Operations



Waste Management

- Typically Much More Solid Waste Generated than Liquid Waste
- Stockpiles and Bins Instead of Tanks



Infrastructure Repair

- RP Goal is to Return the Pipeline or Rail Line Back Into Service ASAP





Public Relations

- More Likely to Impact Native American or Other Culturally Sensitive Lands
- Much Higher Media Exposure and Public Access
- “NIMBY” Issues/ Uncooperative Residents



Questions?

Comments?

Thank You

