OTC-35596-MS | Amended Reefing Legislation Is Needed To Spur Decommissioning of California Offshore Oil & Gas Platforms

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Topics Covered

1. OCS Platform Overview - location, water depth, size
2. Operational Status
3. Decommissioning Outlook and Challenges
4. Federal and State Reefing Legislation
5. Recommendations for Amending CA Reefing Legislation (CMRLA)

CALIFORNIA OIL AND GAS PLATFORMS

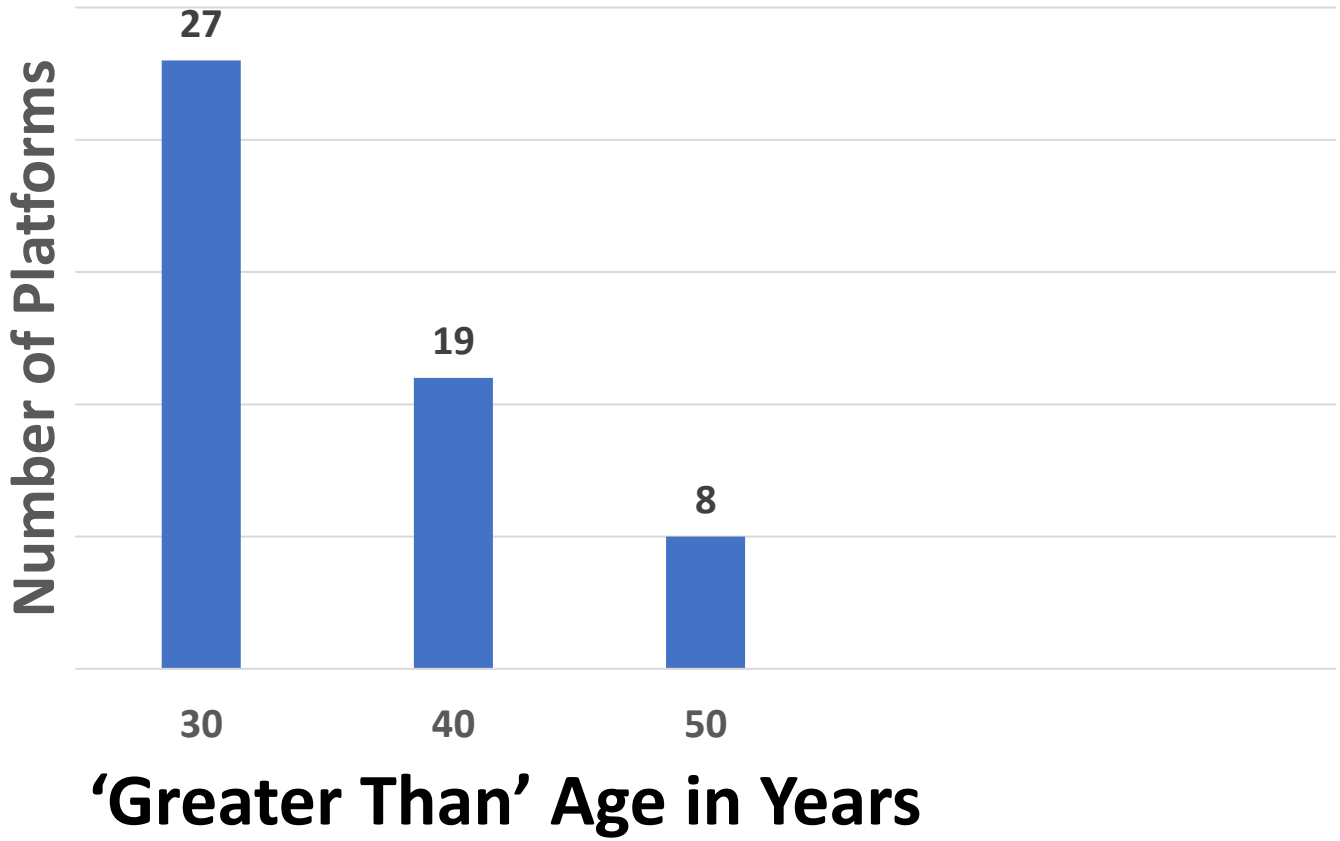
CALIFORNIA PLATFORM OVERVIEW

- 4 State & 23 OCS platforms (all fixed steel jacket structures)
- Age Range: 31 – 62 years
- Water depth: 22 – 1,198 feet
- Removal Weight: 1,380 – 86,513 tons
- Operating Status:
  - 14 producing
  - 13 shut-in/production terminated
  - 7 in early stages of decommissioning

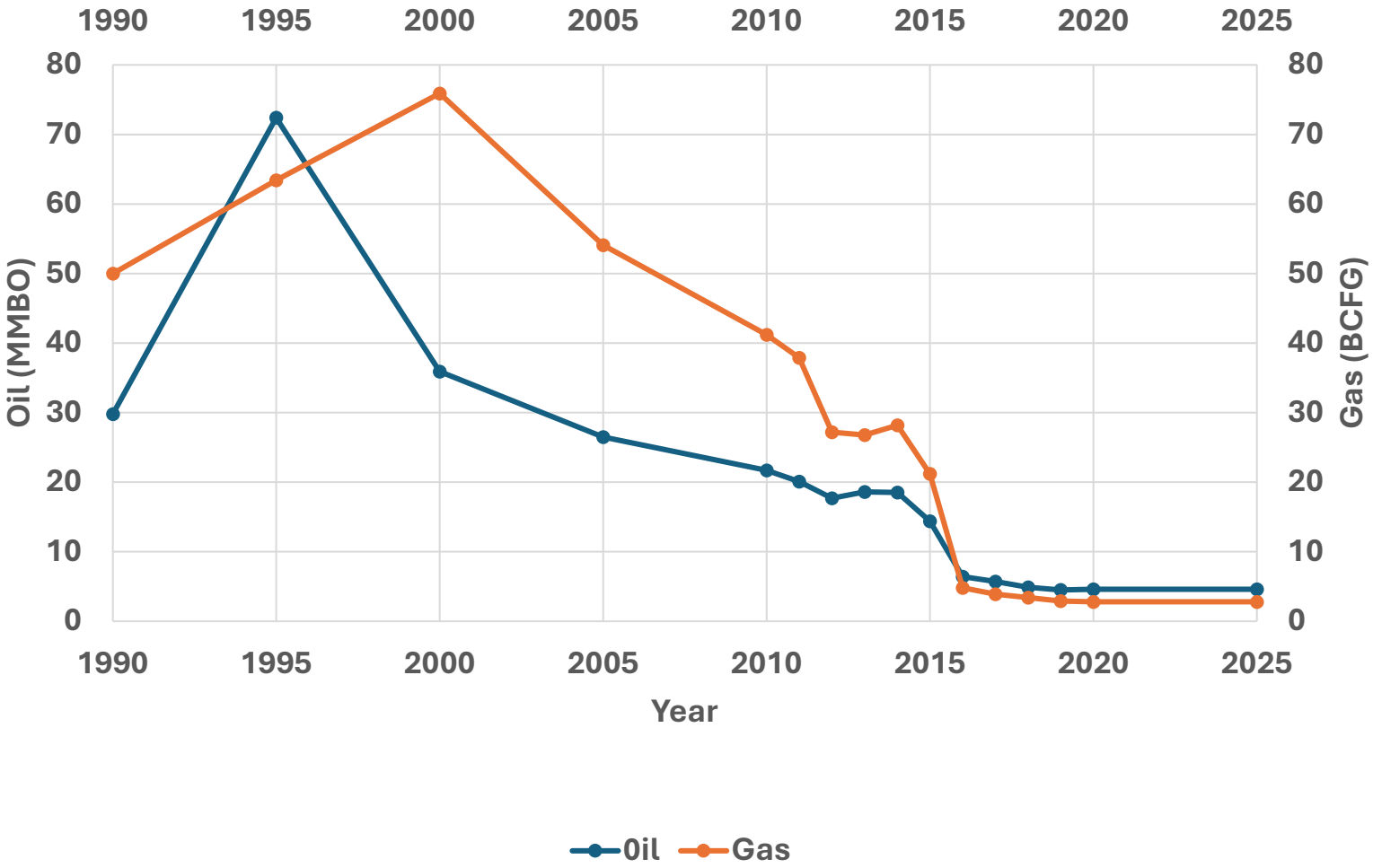
California Oil and Gas Platforms

Platform	Year Installed	Operating Status Fourth Qtr. 2024	Water Depth (feet)	Estimated Removal Weight (short tons)	Wells Drilled	OCS Operator[1]
San Pedro Bay – Los Angeles County						
Edith	1983	Producing	161	8,556	18	DCOR
Ellen	1980	Producing	265	11,655	63	BOC
Elly[2]	1980	Producing	255	9,400	0	BOC
Emmy	1963	Producing	47	2,480	64	CRC
Esther	1985	Producing	22	3,523	64	DCOR
Eureka	1984	Producing	700	33,377	50	BOC
Eva	1964	Producing	57	2,686	44	DCOR
Eastern Santa Barbara Channel – Ventura and Santa Barbara County						
A	1968	Producing	188	4,896	52	DCOR
B	1968	Producing	190	4,959	57	DCOR
C	1977	Producing	192	5,718	38	DCOR
Henry	1979	Producing	173	4,006	23	DCOR
Hillhouse	1969	Producing	190	5,834	47	DCOR
Gilda	1981	Producing	205	11,293	63	DCOR
Gina	1980	Producing	95	1,380	12	DCOR
Habitat	1981	Production terminated	290	9,611	20	DCOR
Gail	1987	Production terminated	739	37,057	28	BWEG[2]
Grace	1979	Production terminated	318	13,074	28	BWEG[2]
Hogan	1967	Production terminated	154	5,098	39	BWEG[3]
Houchin	1968	Production terminated	163	5,615	35	BWEG[3]
Western Santa Barbara Channel – Santa Barbara County						
Hondo	1976	Shut-in	842	29,478	28	Sable
Harmony	1989	Shut-in	1,198	86,513	34	Sable
Heritage	1989	Shut-in	1,075	69,192	48	Sable
Holly	1966	Production terminated	211	5,515	30	CSLC[4]
Santa Maria Basin – Santa Barbara County						
Harvest	1985	Production terminated	675	35,150	19	FMC
Hermosa	1985	Production terminated	603	30,868	13	FMC
Hidalgo	1986	Production terminated	430	23,384	14	FMC
Irene	1985	Production terminated	242	8,762	26	FMC

RANGE IN AGE OF THE 27 CALIFORNIA PLATFORMS



CALIFORNIA OCS OIL AND GAS PRODUCTION 1990 - 2025



CALIFORNIA OCS DECOMMISSIONING PROJECTS

Platform	OCS Operator[1]	Operating Status Fourth Qtr. 2024	COP (Year)	Status of Decommissioning Applications
Habitat	DCOR	Prod. terminated	2016	Final decommissioning application pending
Gail	BWEG[2]	Prod. terminated	2017	Final decommissioning application pending
Grace	BWEG[2]	Prod. terminated	2017	Final decommissioning application pending
Hogan	BWEG[3]	Prod. terminated	2020	ConocoPhillips has appealed BSEE order to decommission
Houchin	BWEG[3]	Prod. terminated	2020	ConocoPhillips has appealed BSEE order to decommission
Harmony	Sable	Shut-in	2015	Production may resume if pipeline permits are approved
Heritage	Sable	Shut-in	2015	Production may resume if pipeline permits are approved
Hondo	Sable	Shut-in	2015	Production may resume if pipeline permits are approved
Harvest	FMC	Prod. terminated	2015	Final decommissioning application pending
Hermosa	FMC	Prod. terminated	2015	Final decommissioning application pending
Hidalgo	FMC	Prod. terminated	2015	Final decommissioning application pending
Irene	FMC	Prod. terminated	2021	Final decommissioning application pending

PLATFORM HOLLY

- **Installed: 1966**
- **Water Depth: 211’**
- **Est. Weight: 5,515 tons**
- **Distance to Land: 2.5 miles**

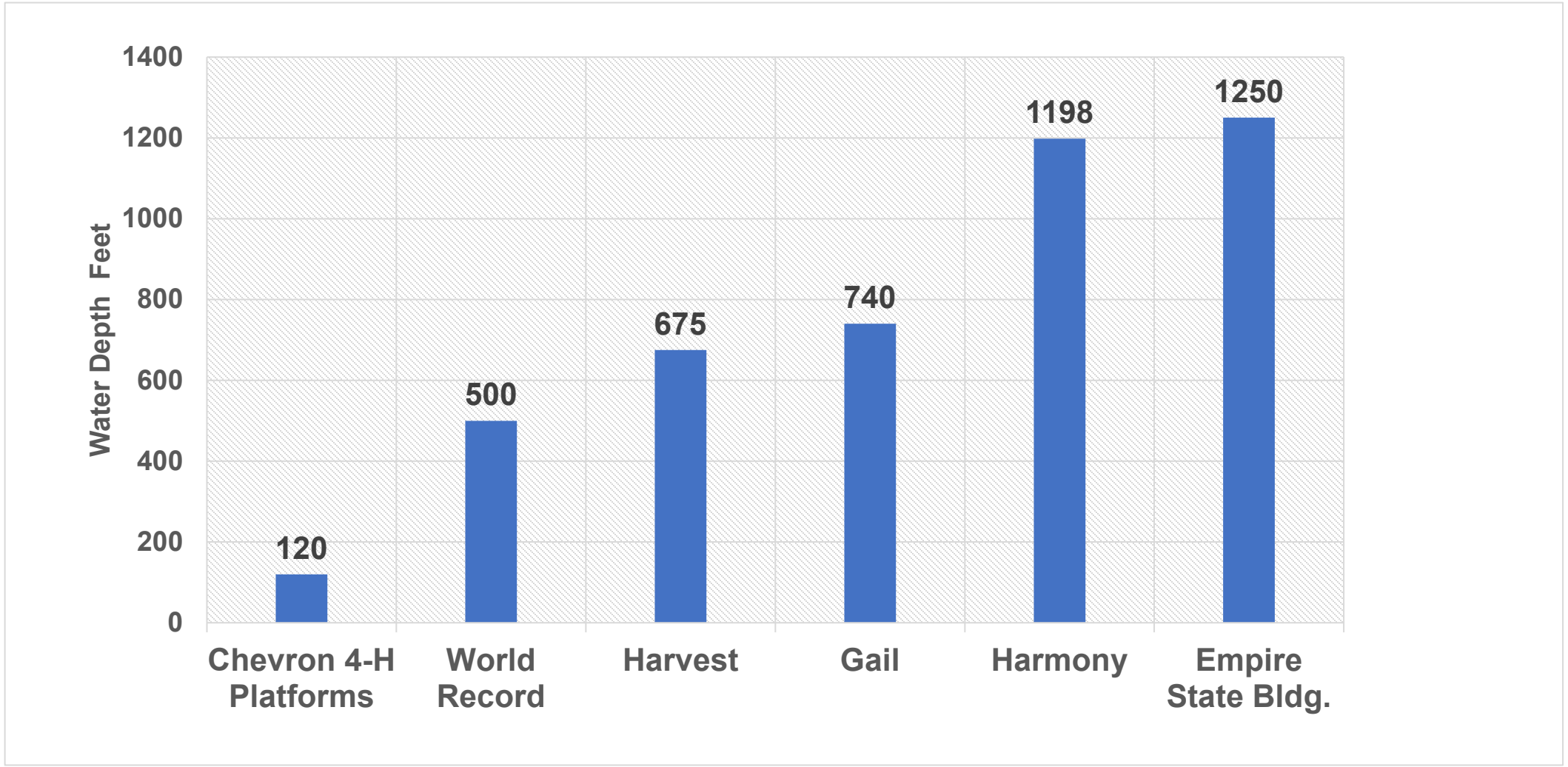
OCS PLATFORM GAIL

- **Installed: 1987**
- **Water Depth: 739’**
- **Est. Weight: 37,057 tons**
- **Distance to Land: 9.9 miles**

OCS PLATFORM HARVEST

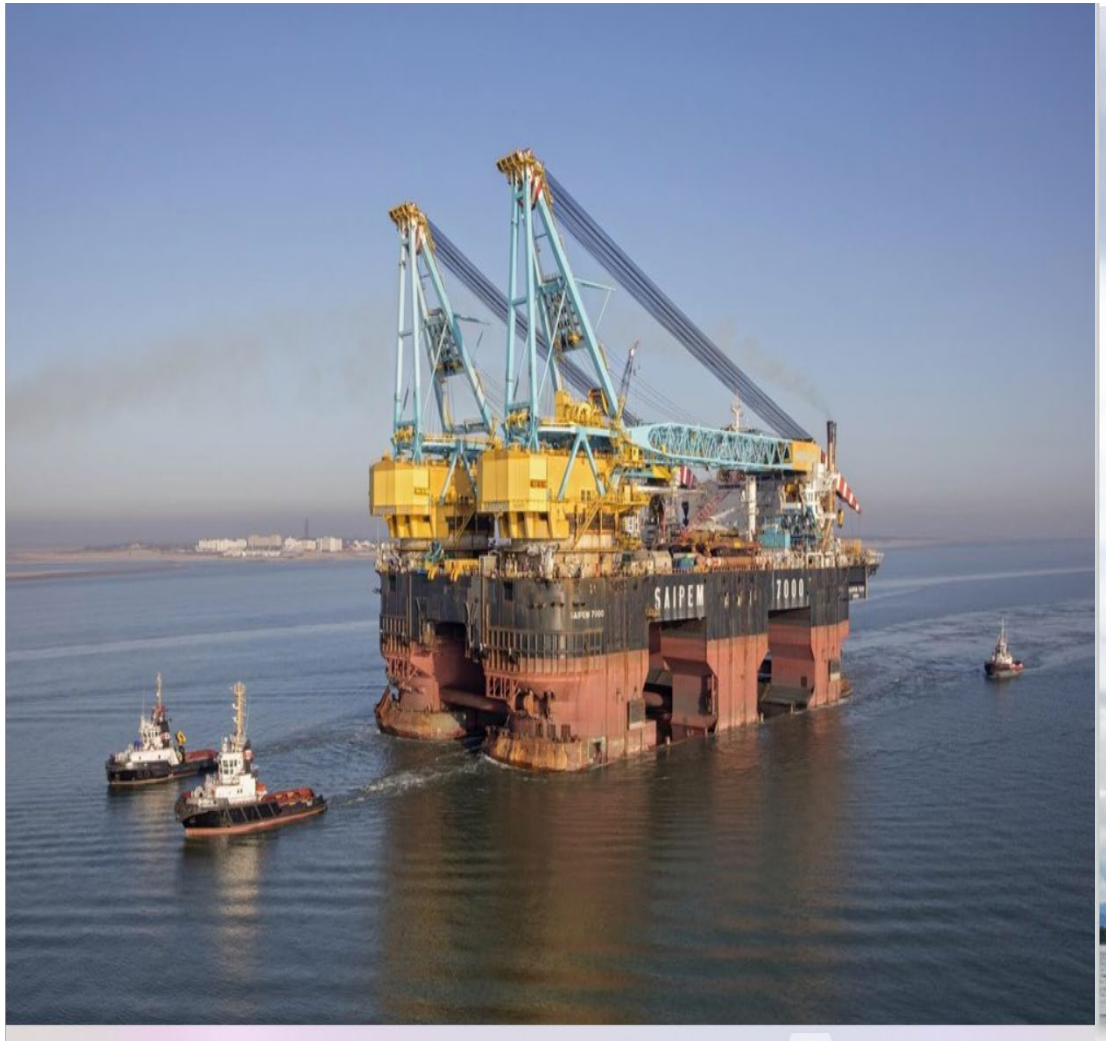
- Installed: 1985
- Water Depth: 675’
- Est. Weight: 35,150 tons
- Distance to Land: 6.7 miles

JACKET SIZE COMPARISON



The Large California Platforms are Beyond Human Scale

SAIPEM 7000 & THIALF, AMONG THE WORLD'S LARGEST HLVS



CALIFORNIA DECOMMISSIONING CHALLENGES

1. Large structures and limited industry deep-water experience with complete removal.
2. Lack of infrastructure - very high HLV/DB mobilization costs for the very large equipment required.
3. Limited onshore processing & disposal options.
4. An unworkable rigs-to-reef act.
5. Very complex regulatory environment, untested for decommissioning projects.

LIMITED ONSHORE DISPOSAL OPTIONS

- SA Recycling Facilities in Long Beach, currently the only site available.
- Primarily processes industrial scrap (autos, rail cars).
- Limited yard capacity (16 acres) and current crane capacity (50 tons).
- 1996 Chevron 4-H platforms @ 10,000 tons total.
- Future OCS projects will generate 5 – 10 times more material.
- New or expanded processing required or long hauls to GOM?
- Reefing - Superior option in terms of costs, environmental impacts
- Preservation of habitat value (large fish populations, somatic prod.)

PORTION OF PLATFORM JACKET REMAINING IF REEFED			
Platform	Water Depth	Reefed Jacket Height	Percent of Jacket Remaining
Harmony	1,198	1,113	93
Heritage	1,075	990	92
Hondo	840	755	90
Gail	739	654	88
Eureka	700	615	87
Harvest	675	590	87
Hermosa	603	518	86
Hidalgo	430	345	80
Grace	318	233	73
Habitat	290	205	71

BIOLOGICAL PRODUCTIVITY RATINGS OF PLATFORMS

Platform	Water Depth (ft.)	Jacket Volume (cu. ft.)	Mean Biomass (lbs.)	Mean Somatic Production (lbs./yr.)
Eureka	700	19,900	71,900	8,400
Ellen	265	4,700	41,900	8,300
Elly	255	5,000	40,100	3,300
Grace	318	7,100	39,400	11,000
Hondo	842	20,800	31,600	4,600
Heritage	1,075	52,600	23,700	3,600
Irene	242	4,400	17,700	6,900
Hermosa	603	21,200	17,200	3,600
Harvest	675	24,100	15,900	3,800
Edith	161	4,000	12,200	1,500

NATIONAL FISHERIES ENHANCEMENT ACT (NFEA)

- **NEFA** - was enacted by Congress in 1984 to:
  - promote reefing of platforms and enhance fishery resources. and
  - address industry concerns about long-term liability risks.
- **National Artificial Reef Plan -** NEFA required the Dept. Commerce to provide guidance on the siting, design, construction and management of artificial reefs.
- **ACOE Permits** – NFEA requires States to obtain permits from ACOE who ensures compliance with NARP guidelines.
- **Liability** - NFEA requires states to accept liability for the reef and significantly limits the liability exposure of the States and reef donors so long as ACOE permit conditions are met.
- **State R2R Acts** - LA, TX, AL and MISS. enacted R2R legislation adopting NFEA requirements.
- **To date, +600 platforms have been reefed in Gulf of Mexico (America**).

CALIFORNIA REEFING CHALLENGES

1. CA Marine Resources Legacy Act (AB 2503) of 2010
2. Considered unworkable by industry due to:
   - Liability concerns (unlimited/perpetual)
   - High-cost share of 80% of the savings.
3. As a result, there is no CA Artificial Reef Program today.
4. Under current OCS regulations, platforms can only be reefed if:
   a) Structure becomes part of a State Artificial Reef program,
   b) The State accepts liability, and
   c) ACOE issues a permit.

ATTRIBUTES OF EFFECTIVE REEFING LEGISLATION

- **Liability** - The State indemnifies and holds reef donors harmless from and against any, and all claims/damages after the title to the structure passes to the State.
- **Oil Spills & Hazardous Materials** - The donor retains liability and responsibility.
- **Maintenance** - Donor shall have no obligation or duty whatsoever to provide for the maintenance or repair of the donated structure or any appurtenance.
- **Cost Share -** Donors typically share 50% of cost savings.

COMPARISON OF GOM AND CMRLA REEFING PROVISIONS

Provision	GOM	California
Liability	State assumes liability	Donor has unlimited and perpetual liability
Oil spills/Haz. Material	Donor retains responsibility	Donor retains responsibility
Maintenance/Repair	State assumes responsibility	Donor retains responsibility
Cost Share	50%	80%

RECOMMENDATIONS FOR AMENDING CMRLA

1. Modify the liability provisions.
2. Reduce cost sharing requirement to 50%.
3. Delete provisions requiring donors to fund operations and management costs.
4. Delete provisions requiring 1st applicant to cover reefing program startup costs.

SUMMARY OF KEY POINTS

- CMRLA is unworkable in its present form due to its onerous liability and cost sharing provisions.
- Full platform removal will present major engineering, environmental, and material disposal challenges.
- Amending CMRLA to enable reefing would:
  1. Facilitate the expeditious removal of aging oil and gas infrastructure.
  2. Significantly reduce engineering and materials disposal challenges.
  3. Significantly reduce marine and onshore environmental impacts.
  4. Preserve important habitat for fish and other marine organisms.
  5. Generate millions of $ that would be devoted to coastal marine preservation and enhancement projects.


Questions?