

# Fuel Efficiency Survey Results

November 2008



# Survey Overview

- Variety of questions: vessel type, engine hp, rpm, fuel consumption, species fished, etc.
- 3 different questionnaires:
  - Shrimp Fleet: 76/360
  - Greater than 40' Fleet: 118/459
  - Less than 40' Fleet: 113/3140

# Shrimp Fleet

- 76 surveyed.
- Average age of vessels: 8 years(after rebuild)
- Vessel construction:
  - 41- fiberglass over wood
  - 26- fiberglass
  - 9- steel
- Average Draft:  
11 ft.



## Engine Make

|                |    |
|----------------|----|
| Caterpillar    | 35 |
| Cummins        | 27 |
| Mitsubishi     | 7  |
| Volvo          | 6  |
| Detroit Diesel | 1  |
| <hr/>          |    |
| TOTAL          | 76 |

## Gear Reduction

|         |     |
|---------|-----|
| 4 : 1   | 8%  |
| 4.5 : 1 | 13% |
| 5 : 1   | 43% |
| 6 : 1   | 18% |
| Other   | 18% |

# RPMs

# Horsepower

|             | Steaming | Towing |
|-------------|----------|--------|
| <1000       | 0        | 3      |
| 1000 - 1250 | 3        | 22     |
| 1251 - 1500 | 41       | 43     |
| 1501 - 1750 | 32       | 5      |

Horsepower ranged from 350 – 860.



# Litres of Fuel Consumed/Trip

< 4999 L 11

5000 – 5999 L 17

6000 – 6999 L 7

7000 – 7999 L 6

8000 – 8999 L 7

> 9000 L 5

# Anti-Roll Device(shrimp vessels)

Stabilizers 87%

Anti-Roll Tanks 9%

Rolling Chocks 4%

# Trawl Characteristics

## Trawl Types

|                       |            |
|-----------------------|------------|
| Bob Kelly 1000        | 13%        |
| <b>Bob Kelly 1200</b> | <b>33%</b> |
| Frank Earle 1000      | 13%        |
| Other                 | 41%        |

## High-Efficiency Twine

|     |     |
|-----|-----|
| Yes | 33% |
| No  | 67% |

## Door Types

|                  |            |
|------------------|------------|
| Poly Ice         | 19%        |
| <b>Tiburon</b>   | <b>26%</b> |
| <b>Bob Kelly</b> | <b>26%</b> |
| Other            | 29%        |

# Fixed Gear Overview (40 – 64'11")

- 118 surveyed, 459 licence holders.
- Average age of vessels: 9 years(after rebuild).
- Vessel construction:
  - 74 fiberglass
  - 44 fiberglass over wood
- Average Draft: 6 ft.



## Engine Make

|             |     |
|-------------|-----|
| Volvo       | 23  |
| Cummins     | 22  |
| Mitsubishi  | 20  |
| Caterpillar | 19  |
| GM          | 11  |
| John Deere  | 9   |
| Others      | 13  |
| <hr/>       |     |
| TOTAL       | 117 |

## Gear Reduction

|         |     |
|---------|-----|
| 3 : 1   | 51% |
| 3.5 : 1 | 7%  |
| 4 : 1   | 8%  |
| 4.5 : 1 | 12% |
| 5 : 1   | 8%  |
| Other   | 14% |

# RPMs(40-64'11")

## Steaming

|                    |           |
|--------------------|-----------|
| <1000              | 0         |
| 1000 - 1250        | 2         |
| 1251 - 1500        | 34        |
| <b>1501 - 1750</b> | <b>38</b> |
| 1751 - 2000        | 30        |
| >2000              | 13        |

## Fishing (fixed gear)

|                  |           |
|------------------|-----------|
| 500 - 600        | 6         |
| <b>601 - 700</b> | <b>49</b> |
| 701 - 800        | 22        |
| 801 - 900        | 13        |
| 901 - 1000       | 11        |
| >1001            | 10        |

# Litres Consumed per Trip

|               |    |
|---------------|----|
| < 500 L       | 7  |
| 500 – 1000 L  | 25 |
| 1001 – 1500L  | 18 |
| 1501 – 2000 L | 17 |
| > 2001 L      | 8  |



## Horsepower

Horsepower ranged from 165 – 1000.

# Generators

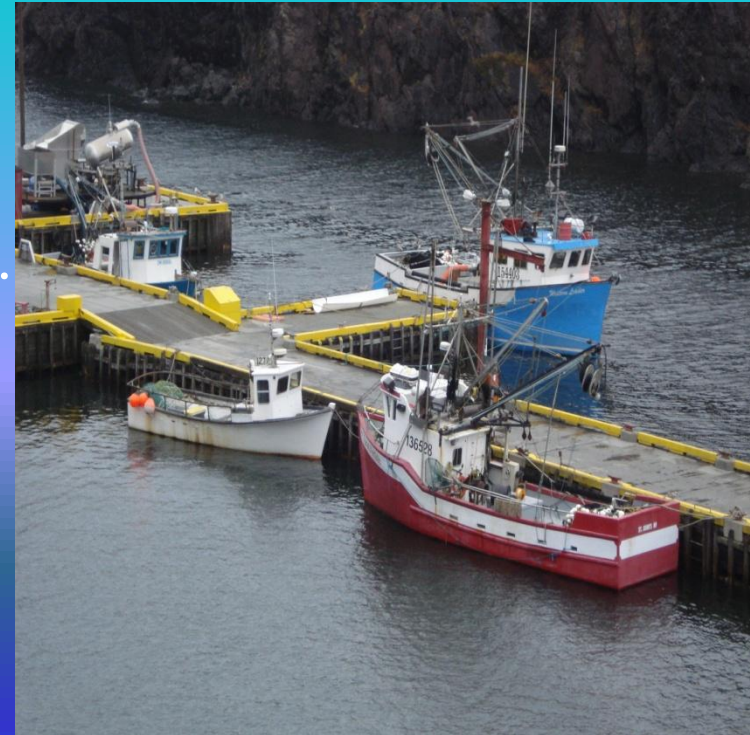
76% of licence holders have a generator onboard.

# Anti-Roll Device

99 of the 118 respondents have stabilizers;  
3 of those also have rolling chocks.

# Fixed Gear Overview (<40')

- 113 surveyed, 3,140 licence holders.
- Longliners 56 (50%)
  - Average age of vessels: 10 years.
  - 30 fiberglass over wood; 26 fiberglass.
  - Draft range: 2.5 – 7'; average 3'.
- Skiffs 11 (10%)
  - Average age of vessels: 17 years.
  - 6 fiberglass; 5 fiberglass over wood.
  - Draft range: 3 – 12'; average 5'.
- Speedboats 45 (40%)
  - Average age of vessels: 11 years.
  - 37 fiberglass; 3 fiberglass over wood; 3 aluminum; 2 wood



# Longliners(<40')

Engine Make

Horsepower

|             |    |           |    |
|-------------|----|-----------|----|
| Cummins     | 12 | <100      | 7  |
| John Deere  | 12 | 100 – 200 | 23 |
| Ford        | 10 | 201 – 300 | 22 |
| Volvo       | 6  | >300      | 2  |
| Perkins     | 5  |           |    |
| Caterpillar | 5  |           |    |
| Other       | 5  |           |    |



# Skiffs

## Engine Make

Yanmar

5

Volvo

2

Other

5

## Horsepower

40 - 70

9

>70

3



# Speedboats

## Engine Make

|         |    |
|---------|----|
| Yamaha  | 16 |
| Mercury | 5  |
| Honda   | 4  |
| Mariner | 4  |
| Other   | 8  |

27 – 2-stroke engines  
15 – 4-stroke engines  
1 – E-tech engine

## Horsepower

|         |    |
|---------|----|
| 20 - 40 | 8  |
| 41 - 60 | 15 |
| 61 - 80 | 3  |
| >80     | 11 |



# Longliners - RPMs

## Steaming

|             |    |
|-------------|----|
| <1600       | 3  |
| 1600 - 1800 | 14 |
| 1801 - 2000 | 12 |
| 2001 - 2200 | 11 |
| >2201       | 8  |

## Fishing (fixed gear)

|             |    |
|-------------|----|
| <800        | 11 |
| 800 - 999   | 12 |
| 1000 - 1199 | 18 |
| >1199       | 3  |

# Skiffs - RPMs

## Steaming

|             |   |
|-------------|---|
| <1000       | 2 |
| 1000 - 3000 | 4 |
| >3000       | 3 |

## Fishing (fixed gear)

|       |   |
|-------|---|
| <1000 | 5 |
| >1000 | 3 |

# Speedboats - RPMs

## Steaming

|       |   |
|-------|---|
| <4000 | 4 |
| >4000 | 7 |



# Changes in Behavior/Vessel

- Reduced Steaming Speed
- Replaced Blades
- Alterations to Hull
- Cleaned Hull
- Fuel Flow Meter
- New Engine
- .....Significant Investments!

# RISING FUEL BILLS: WHAT'S LEFT FOR THE FISHERY?



**FFAW**  **CAW**  
FISH, FOOD AND  
ALLIED WORKERS

**THANK-YOU**