# PUGET SOUND PILOTAGE DISTRICT TARIFF AMMENDMENT RECOMMENDATION JULY 1, 2006 THRU JUNE 30, 2007 TO THE WASHINGTON STATE BOARD OF PILOTAGE COMMISSIONERS

## PREPARED BY PACIFIC MERCHANT SHIPPING ASSOCIATION AND POLAR TANKERS

## APRIL 24, 2006

**TO: WASHINGTON STATE BOARD OF PILOTAGE COMMISSIONERS**

The Pacific Merchant Shipping Association (formerly PSSOA) and Polar Tankers have worked with the Puget Sound Pilots (PSP) under a Memorandum of Understanding (MOU) for the past ten years to provide joint tariff proposals to the Commission. We have all enjoyed the benefits of the MOU and the self-correcting formula. Unfortunately, PSP terminated the MOU and instead opted to seek **extraordinary** and we believe **unreasonable increases** in the tariff, TNI and personal allowances that will result in huge increases in income as well as compensatory day and retirement obligation.[1]

We have spent considerable time reviewing the issues, evaluating pilot assignments, workloads, compensation, and benefits as well as conducting comparisons with relevant ports both directly and via our membership. Those we represent were fully apprised of our findings and of the magnitude of the PSP proposals. Ultimately we were faced with two choices; agree to the increases sought by PSP or make our case to the Board of Pilotage Commissioners for the setting of fair and reasonable compensation and tariff levels. We have confidence that the Board will focus on ensuring safe, efficient, proper and competent pilot service with all appropriate consideration for the economic well being and competitiveness of our industry.

Our recommendation this year is based in part on the self-adjusting formula found in the now expired MOU. A brief discussion of the MOU's successes and history are highlighted below:

- PSP co-created the formula approach in large part to obtain protection against downturns in activity.
- PSP signed an agreement formalizing this approach not once but twice – their commitment to this approach highlights the value PSP placed on protecting net income against downturns.
- Tariff adjustments based on the formula and MOU have appropriately provided for operating expenses, capital expenditures as well as fair and reasonable increases in compensation.

[1] PSP Letter Dated December 1, 2005 terminated the MOU at the expiration of the term

- PSP helped set and agreed to both the Target Net Income amount AND the rate of increase. There were no surprises in TNI amounts from year to year for either party as increases were based on CPI plus 1% over the past five years.
- PMSA/POLAR received no complaints from PSP until last year when the San Francisco pilot compensation spike was announced (SF has no downside protection).
- MOU/Formula based **Individual Pilot Net Income outperformed TNI** by 9.33% or $175,326 over the life of the formula and **exceeded TNI nine out of ten years**.
- Individual Pilot Net Income reported by PSP for each pilot was a total of $85,330 **over** Target Net Income over the last three years.
- Ironically, it is these last three years where PSP believes the formula based approach failed them. We disagree.

Last year industry made a **good faith proposal** to adjust the tariff 6.79% **above** the formula based recommendation. The offer was approved and implemented. Our offer will produce an estimated **$1,400,000 of additional income** or $27,500 for each pilot during the July 1, 2005 to June 30, 2006 tariff year. This good faith action appears to have had no impact on negotiations or compromise as PSP continues to seek extraordinary increases.

In furtherance of our good faith effort last year, **we request the Board adopt the following amendments to the general tariff and associated charges**:

- Increase all categories of the general tariff by 3.46% except the "Delay of Sailing" fee and transportation.
- Increase the "Delay of Sailing" fee by first doubling the current fee and then increasing the hourly rate by 15% for each hour of delay after the first hour. Thus, the first hour would be charged at $236, the second at $271, etc. All other hourly charges would increase by the 3.46% described above.
- Increase Target Net Income by 5% to make it $225,398. (3% for inflation; 1% sweetener; 1% to capture the "Delay of Sailing" increase so the formula does not correct downward next year.)
- This proposal is designed to fund 52 pilots plus a president plus 1.2 pilots worth of comp time. We chose the number 53 based on information presented by the TEC in past Board meetings as the most likely number of PSP pilots working during the tariff year. Now that the MOU has expired and the Board is setting the number of pilots, we feel that using the actual number of pilots in the self-correcting formula is the most appropriate methodology. (Please note that PSP used the manning formula in the now expired MOU to generate the 58 pilots they used when they ran their version of the self-correcting formula. This would only

be appropriate if the MOU were continued and the self-correcting feature allowed to work the following year.)

- Individual Business Expense would be set at $28,621. Normally the IBE would be set by increasing the previous year's IBE by CPI. This year, in addition to CPI, we are recommending that the IBE also be increased by $3,960 in order to offset increased medical insurance costs.

Please find attached further information to help you make your decision regarding tariffs on May 11. If you have any questions regarding this proposal or the information contained within, please don't hesitate to contact PMSA or Polar Tankers representatives.

Respectfully yours,

M R Moore

Michael R. Moore
On behalf of PMSA/Polar Tankers

# Table of Contents

## PUGET SOUND "SELF ADJUSTING TARIFF FORMULA"
**2006 Tariff Year (July 1, 2006 to June 30, 2007)**

| | PMSA/POLAR | PSP |
|---|---|---|
| A Target Net Income for the preceding year | $214,665 | Same |
| **MINUS:** | | |
| B Total Pilotage Revenue | $20,673,996 | Same |
| **MINUS:** | | |
| C Operating Expenses | $6,615,867 | Same |
| Seattle (includes GH retirement) $2,211,757 | | |
| Port Angels $592,402 | | |
| Pilot Boats $2,495,872 | | |
| PSP Retirement $1,315,836 | | |
| D Other Expenses | **$2,354,750** | **$2,056,109** |
| Travel Reimbursement $837,837 | | |
| Individual Business Expense Allowance | | |
| Industry: 2005 level + CPI $28,621 * 53 pilots = $1,516,913 | | |
| **PSP: 2005 level $23,943 X 50.9 pilots = $1,218,272 * *Additional IBE allowance is listed under Variable H. Total IBE allowance in PSP's formula = $2,061,418 or $38,479.75 IBE/pilot X 53.57 pilots** | | |
| **PLUS:** | | |
| E Excluded Expenses | $132,579 | Same |
| American Pilots Association dues $79,300 | | |
| Master, Mates & Pilots dues $15,675 | | |
| Lobbyist $37,604 | | |
| **MINUS:** | | |
| F Recapture Amounts | $0 | Same |
| G Projected change in State fees and/or taxes | $0 | Same |
| H Projected Major Capital or Extraordinary Expenses | **$138,529** | **$981,675** |
| PSP & Industry: Projected Capital Expense $93,529 (net result) | | |
| **PSP only: Extraordinary – IBE $843,146** | | |
| PSP & Industry: Extraordinary – Fuel costs $45,000 | | |
| **DIVIDED BY:** | | |
| I Number of active Puget Sound Pilot members | **53** | **58** |
| **Industry: Actual # of pilots---50 current + 6 new – 3 retirees** | | |
| **PSP: Used "manning formula" in expired MOU. The additional 5 "ghost" pilots will add 8.15% to PSP's tariff change.** | | |
| PLUS | | |
| J Number of projected comp days as a "pilot equivalent" (Per PSP) | 1.2 | 1.0 |
| **DIVIDED BY:** | | |
| A Target Net Income for Previous Year | $214,665 | Same |
| **SUBTOTAL** | | **11.94%** |
| **PLUS:** | | |
| K Consumer Price Index for the preceding calendar year | 3.00% | Same |
| L Special Target Net Income Adjustment | 1.00% | Same |
| M TARIFF ADJUSTMENT PRIOR TO "SAILING DELAY" FEE INCREASE: | **3.46%** | **15.94%** |

**(See cover letter for "Sailing Delay" fee increase details.)**

# PUGET SOUND "SELF ADJUSTING TARIFF FORMULA"

The concept that Puget Sound pilotage tariffs could be set using a "self adjusting tariff formula" was first introduced during negotiations for the 1996 tariff hearing by Jimm Sweet, business manager for the Puget Sound Pilots at that time.

**What does the term "self-adjusting tariff formula" mean?**
It is a mechanism whereby recommendations for pilotage rates are set automatically, on an annual basis, using an agreed-to formula.

**How does the formula fit into the tariff setting process?**
The joint industry/pilot tariff recommendation that is submitted to the Washington State Board of Pilotage Commissioners each year has been governed by a Memorandum of Understanding between Polar Tankers, Inc. (formerly Arco), Puget Sound Pilots, and PMSA (formerly PSSOA) that was originally agreed to in 1996 and later re-negotiated in 2001.

The Board in turn is authorized by RCW 88.16.035 (4) to annually fix pilotage tariffs for the Puget Sound pilotage district. Please note that the Board is not bound by law or regulation to accept the joint tariff recommendations put forward by the shipping industry and the Puget Sound Pilots, but has seen fit to do so since the first Agreement was reached in 1996.

**A brief description of how the self-adjusting tariff formula works.**
The formula is a "backward looking" mechanism that compares the Target Net Income (TNI) for the previous year against the actual net income for the previous year, i.e. (TNI – Actual income)/TNI . The resulting difference expressed as a percentage, whether positive or negative, is then added to the change in the Consumer Price Index (CPI) for the previous year. This sum becomes the recommended tariff change for the current year. In its simplest and original form, this can be expressed by the formula…

**(TNI – Actual net income)/TNI + CPI = Tariff adjustment (%)**

In plain English, this means that if the pilots' income the previous year failed to meet the target (the TNI), then the tariff is adjusted upward. Conversely, if the pilots' income greatly exceeded the target, then the tariff is adjusted downward in those cases where the downward correction is greater than CPI. The CPI adjustment is included to compensate the pilots for inflation.

The Target Net Income (TNI) was initially set in 1996 by negotiations between industry and the pilots. In the 1996 to 2000 MOU, the TNI was then adjusted annually by adding a CPI correction to it to compensate for inflation. In the subsequent 2001 to 2005 MOU, TNI was calculated each year by adding a CPI adjustment plus a 1.0% "sweetener" to the previous year's TNI. (Example: $TNI_{2002} = TNI_{2001} + CPI + 1\%$)

Please note that the actual formula used to generate the Puget Sound tariff recommendations is considerably more complicated then that expressed above due to the necessity of calculating "actual net income" for the pilots. In calculating "actual net income", a number of variables are considered including gross revenue, allowed expenses, excluded expenses, number of pilots, projected major capital expenditures for the upcoming year, etc. For almost all variables, the numbers used in the formula are derived from the audited financial statements of the Puget Sound Pilots.

In essence, the self-adjusting tariff formula annually addresses "past sins" as it relates to pilot income and adjusts future tariffs accordingly.

**The complete list of the variables used in the self-adjusting tariff formula.**

(A) **Target Net Income** for the preceding year;

(B) **Total Pilotage Revenue**;

(C) **Operating Expense** (all divisions including Seattle, Port Angeles, pilot boats, and retirement payments);

(D) **Other Expense** (Individual Business Expense and Transportation Expense. These two expenses are not included in the Operating Expense above because they are actually allowances paid to individual pilots. The Individual Business Expense is designed to cover medical, disability and professional insurance; State license fees; annual physical exams; subsistence & lodging; business communications and navigation/office supplies. The Individual Business Expense increases each year by CPI according to the MOU. The Transportation Expense is based on regional taxi fares, and the tariff lists the rates on which this expense is derived. The rates generating the transportation expense change only when the published taxi fares change.);

(E) **Excluded Expenses** (American Pilots Association dues expense, Master, Mates & Pilots dues expense, and lobbyist expense);

(F) **Recapture Amounts** of previously-approved tariff expense (This was originally included to pay off capital expenses that were for historical reasons listed outside the "operating expenses" category. These have now gone to zero, and it is not anticipated that this category will be used again);

(G) **Amount of projected increase or decrease in State fees and/or taxes**, if any;

(H) **Amount of projected first year costs associated with major capital expenditures or other extraordinary expenses**, if any;

I) **Number of active Puget Sound Pilots members** (NOTE: The MOU also contained a "vessel traffic formula" which was an alternative method of determining the number of pilots to be used in the formula. However, since the Board has now formally been tasked with setting the number of pilots, the "vessel traffic formula" would now seem to be moot.);

(J) **Number of projected or retroactive compensatory duty days** (as separately defined) accrued by pilots at the time of their retirement divided by 365 calendar days;

(K) **Consumer Price Index** for the preceding calendar year (The Seattle-Tacoma-Bremerton Area CPI for All Urban Consumers); and

(L) **Special Target Net Income Adjustment** (only applicable in 2001, 2002, 2003, 2004, and 2005). This is the "sweetener" that was negotiated into the 2001 MOU whereby the tariff and TNI are raised by CPI + 1% each year.

**The self correcting tariff formula as seen in the 2001 to 2006 MOU:**

$$\frac{A - \left( \dfrac{B - (C + D) + E - (F + G + H)}{(I + J)} \right)}{A} + K + L = \text{Tariff adjustment}$$

**What percentage has the rate changed each year since the self-adjusting tariff was introduced?**

A summary of the rate changes since 1996 is as follows:

| Year | Tariff Adjustment | |
|---|---|---|
| 1996 | +7.86% | |
| 1997 | +1.94% | |
| 1998 | -3.03% | |
| 1999 | +5.56% | |
| 2000 | -2.85% | |
| 2001 | +1.32% | |
| 2002 | +13.19% | |
| 2003 | -2.20% | |
| 2004 | -16.42% | |
| 2005 | +5.00% | (Also included a one time "dampening factor of +6.79%) |

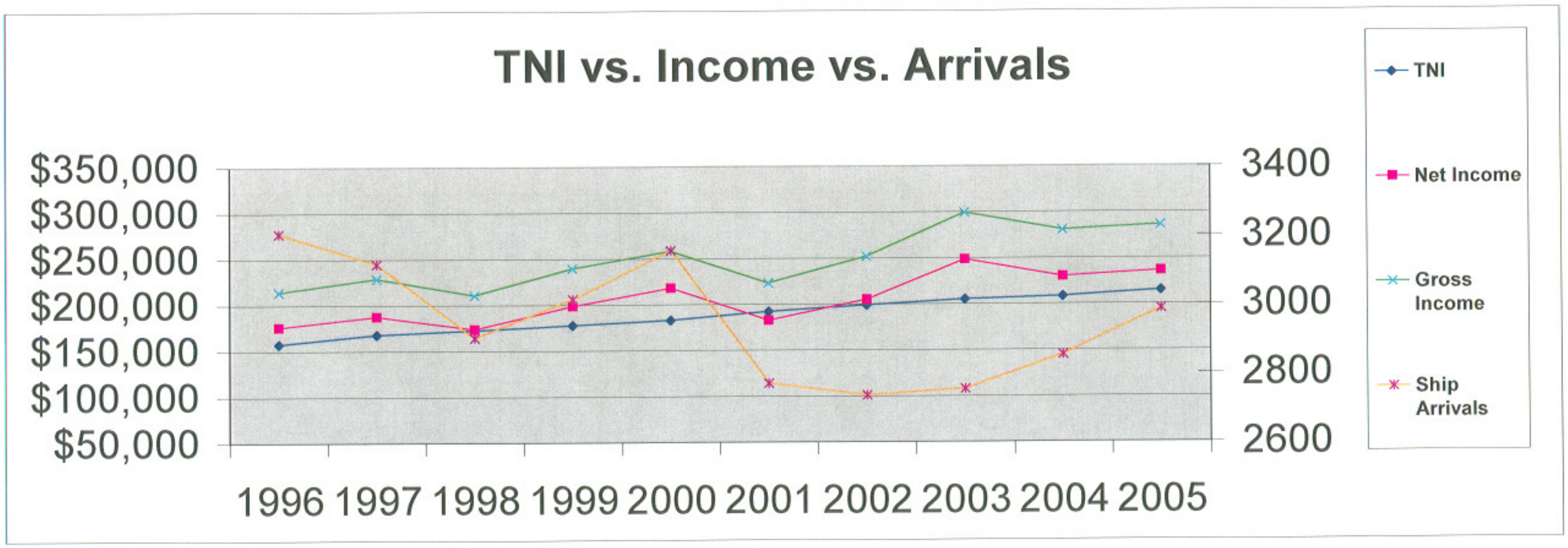
**END**

## PUGET SOUND PILOT TARIFF---PERFORMANCE DATA

**(Net income does NOT Include Individual Exp Allowance; Travel Allowance or B.C. Surcharge)**

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|
| Vessel Arrivals >300 GT | 3207 | 3118 | 2904 | 3016 | 3157 | 2771 | 2736 | 2754 | 2853 | 2987 |
| # pilotage assignments | 8359 | 8118 | 7145 | 7746 | 8254 | 7288 | 7241 | 7338 | 7604 | 8260 |
| Tariff change | 7.86% | 1.94% | -3.03% | 5.56% | -2.85% | 1.32% | 13.19% | -2.20% | -16.42% | 5.00% |
| CPI change (previous year) | 3.00% | 3.40% | 2.90% | 2.90% | 3.00% | 4.10% | 2.50% | 2.10% | 0.50% | 2.10% |
| Ind Business Exp Allowance | $14,870 | $15,376 | $15,822 | $16,281 | $16,769 | $22,297 | $22,854 | $23,334 | $23,451 | $23,943 |
| TNI (= prev yr + CPI + 1%) | $157,536 | $167,713 | $172,577 | $177,581 | $182,909 | $192,237 | $198,966 | $205,134 | $208,211 | $214,665 |
| **Full time pilot net income** | **$175,846** | **$187,357** | **$173,270** | **$198,278** | **$217,588** | **$182,333** | **$204,769** | **$248,086** | **$229,449** | **$235,879** |
| Income % change fm prev yr | | 7% | -8% | 14% | 10% | -16% | 12% | 21% | -8% | 3% |
| Travel allowance (avg) | $14,382 | $14,408 | $12,704 | $15,547 | $15,562 | $13,073 | $14,740 | $16,771 | $17,484 | $16,460 |
| B.C. Surcharge | $9,343 | $11,788 | $8,972 | $9,482 | $8,127 | $5,693 | $9,782 | $11,556 | $10,448 | $9,599 |
| **Full time pilot gross income**[1] | **$214,441** | **$228,929** | **$210,768** | **$239,588** | **$258,046** | **$223,396** | **$252,145** | **$299,747** | **$280,832** | **$285,881** |
| Estimated pension benefit[2] | $2,027 | $23,597 | $24,282 | $24,986 | $25,735 | $27,048 | $27,995 | $28,862 | $29,295 | $30,203 |
| Estimated comp day benefit[3] | | | | | | | | | | $25,464 |
| **Gross Plus Pension/Comp Day Benefits for 2005** | | | | | | | | | | **$341,548** |

[1] Includes net income; Individual Expense Allowance; Travel Allowance; B.C. Surcharge; estimated pension benefit; estimated comp day benefit.
[2] Assumptions: PSP Pension Plan; Age of hire = 42; Retirement age = 65; married with spouse 3 yrs younger than pilot; 2.68% increase in TNI; 5% interest rate; mortality table 94GARU2002.
[3] See "Comp Day Liability" tab.



# TNI Analysis

The following three graphs provide the following comparisons:

- TNI vs CPI
- TNI vs Tonnage
- TNI vs Ship Tons

These graphs use information provided in the PSP recommendation. They indicate that TNI has essentially matched tonnage while exceeding CPI over the last 10 years. These results mean that TNI has been managed exceedingly well. TNI has outperformed CPI over the life of the MOU and formula, and we know that Net Income exceeded TNI over the same time frame by nearly $200,000 ($85,000 over the last three years alone).

Chart2 Chart 1

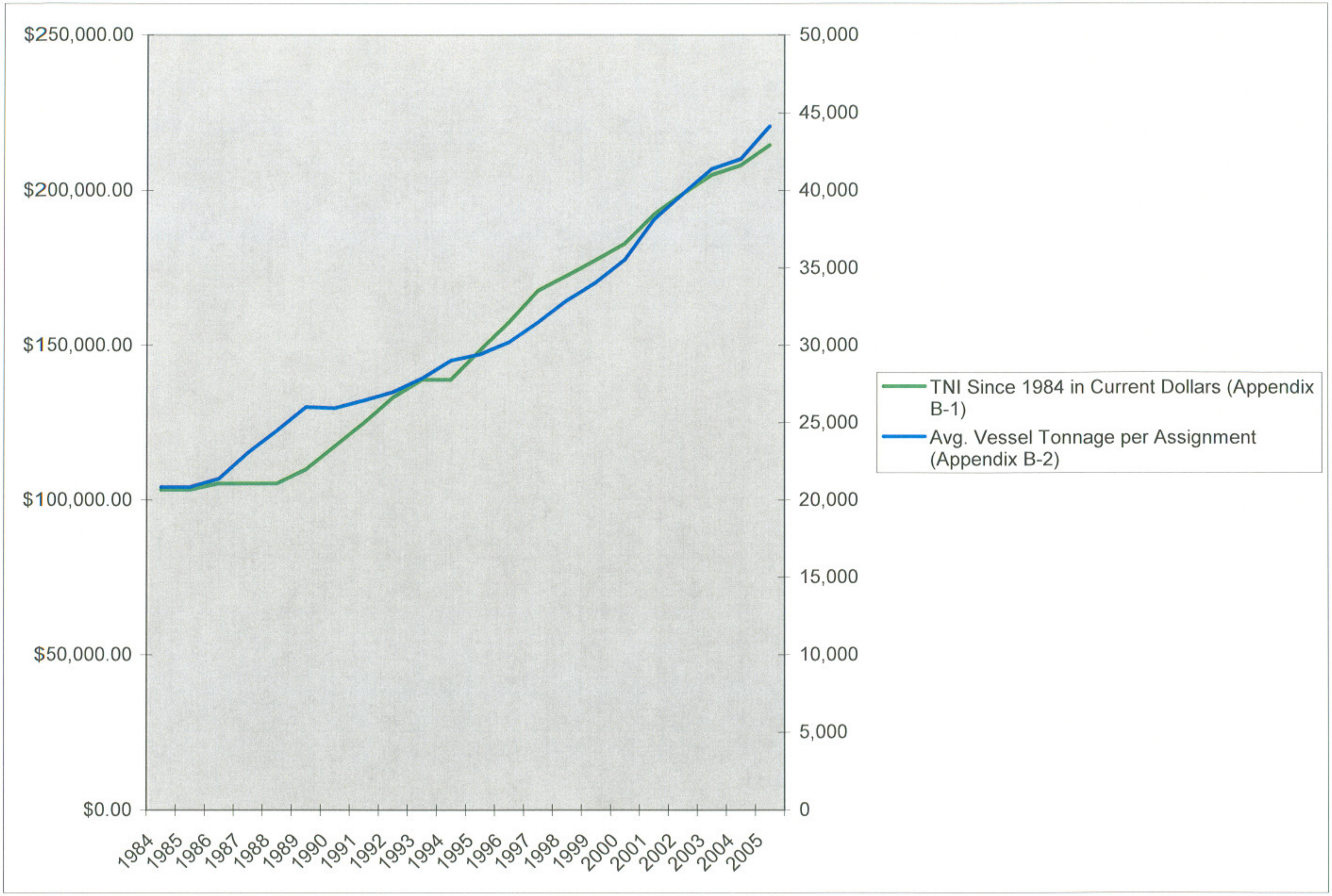


Chart1

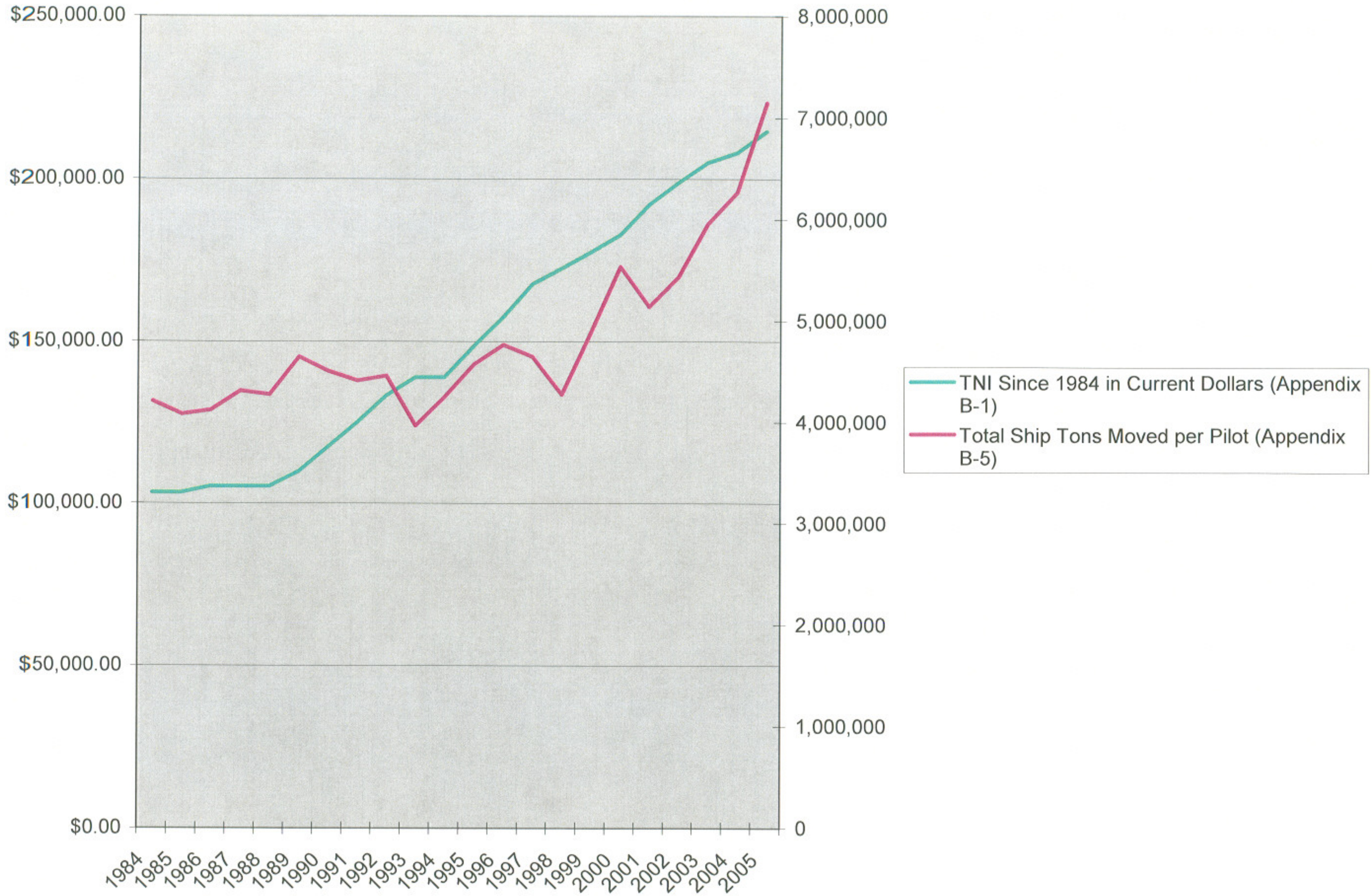
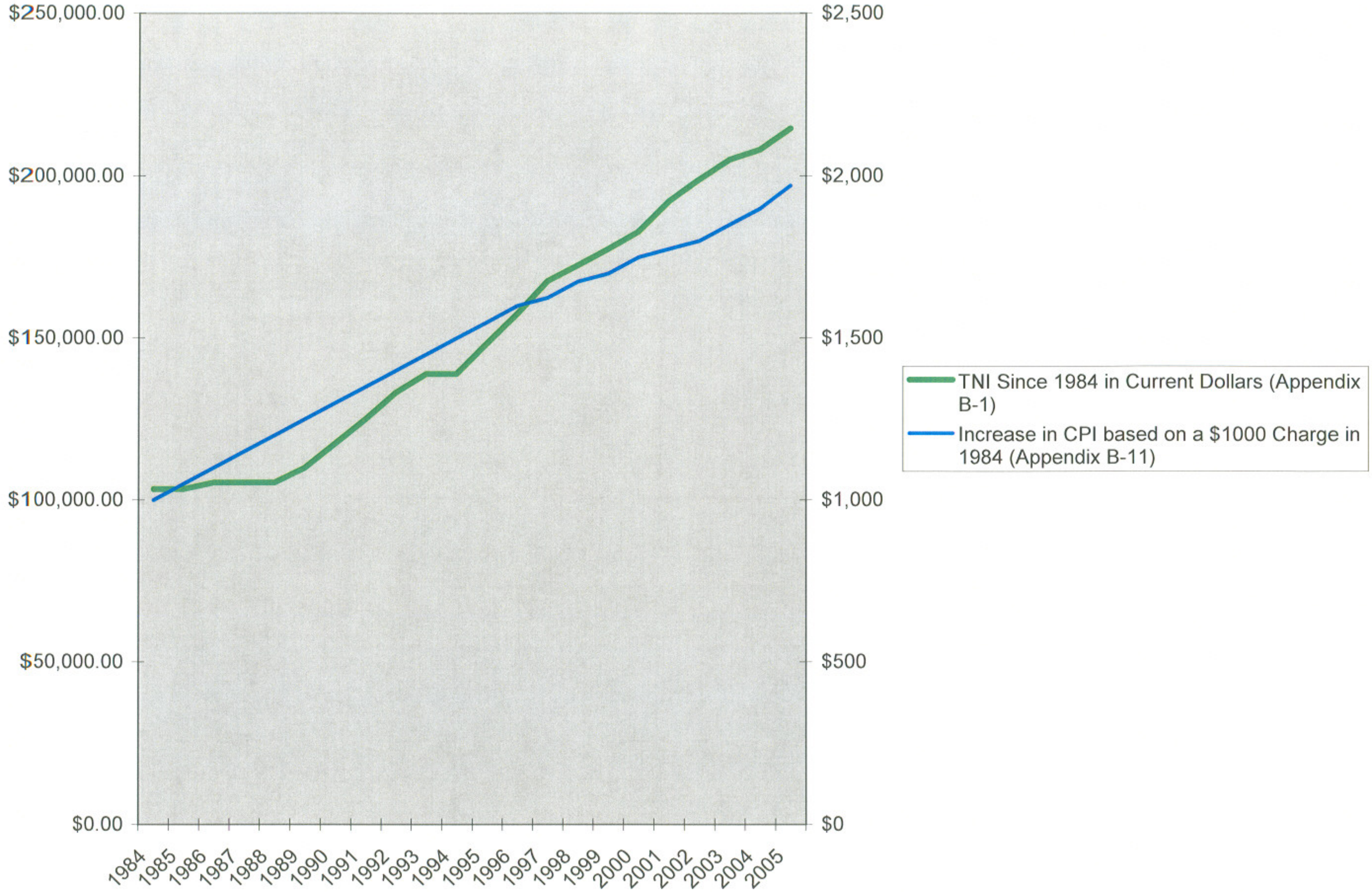

$250,000.00
$200,000.00
$150,000.00
$100,000.00
$50,000.00
$0.00
8,000,000
7,000,000
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
TNI Since 1984 in Current Dollars (Appendix B-1)
Total Ship Tons Moved per Pilot (Appendix B-5)

Chart3


$250,000.00
$200,000.00
$150,000.00
$100,000.00
$50,000.00
$0.00
$2,500
$2,000
$1,500
$1,000
$500
$0
1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005
TNI Since 1984 in Current Dollars (Appendix B-1)
Increase in CPI based on a $1000 Charge in 1984 (Appendix B-11)

# Large Vessels Pay a High Premium in Puget Sound

Much has been stated regarding the increasing size of vessels. We know that cruise ships, additional tanker calls and additional vessel shifts as well as the increasing size of container vessels account for the increases in tonnage reported by PSP. The belief that larger ships always require more skill, focus and energy and that this additional effort has been under-compensated has led PSP to seek an increase in the tariff. However, we questioned this assumption which caused us to analyze how various port tariffs behave as vessel size increases.

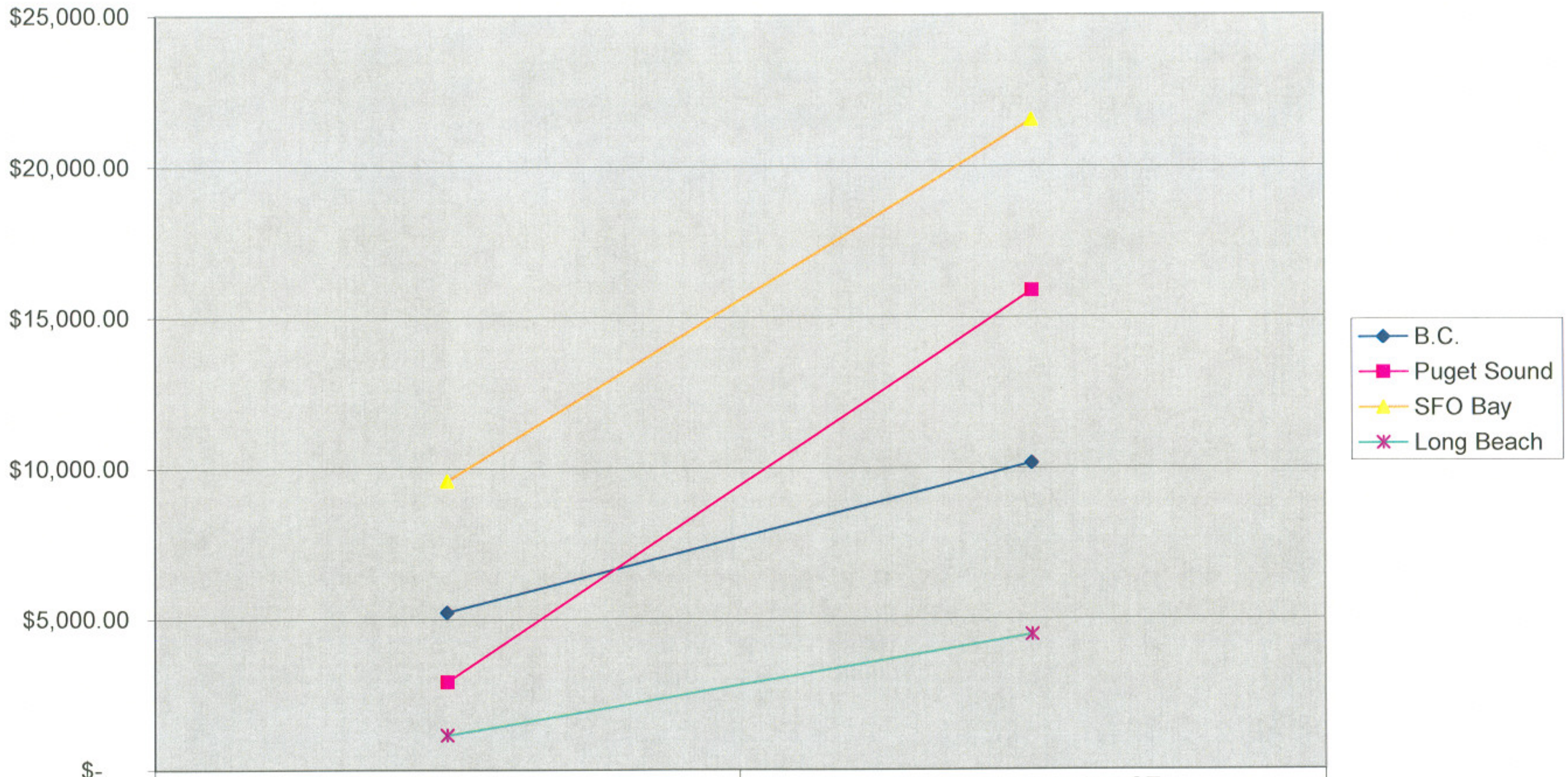
On the enclosed graph you will find the rate of tariff increase between a small tonnage vessel and a large tonnage vessel in four west coast ports. Please note that the Puget Sound rate of increase is the steepest of these examples. Data was derived from actual invoices and calculations.

This means that more revenue is produced per increase in vessel size than in the other ports. The impact of this is as follows:

1. Pilots earn more revenue faster as ship size increases; in other words a vessel mix with increasingly larger vessels will produce much more revenue.
2. General revenue over the past 10 years has gone up more than five times the percentage of tariff increase because larger vessels pay significantly more fees.

Larger vessel designs are incorporating improvements to make them safer, more efficient and more environmentally friendly. There are no tariff adjustments for those ships with innovative designs such as including up to six thrusters, 360 degree propulsion, twin redundant engine rooms and steering systems and other features…and no one is seeking such a change at this time. It is fair and reasonable to recognize that larger vessels are already providing a major share of pilot revenue. PSP is seeking additional compensation in part because vessels are getting larger but the evidence shows that larger vessels in Puget Sound are in fact already paying a higher premium relative to their smaller cousins than they would in other ports.

# Large Vessels Pay a High Premium in Puget Sound




| | Product tanker 11, 954 GT | Cruise ship 115,875 GT |
|---|---|---|
| B.C. | $5,223.78 | $10,160.50 |
| Puget Sound | $2,917.06 | $15,879.06 |
| SFO Bay | $9,575.44 | $21,538.03 |
| Long Beach | $1,156.00 | $4,468.00 |

# ANNUAL PENSION BENEFIT ESTIMATION

Until now, the present value of the PSP pension plan benefit has not been discussed or calculated. However, it is a valuable part of every pilot's compensation package and it is a significant future liability particularly if TNI is increased as dramatically and suddenly as PSP proposes. At the request of industry, a local actuary has done an estimate of the current value of the pension benefit expressed as the percentage of current TNI necessary to fund the plan if the plan were **funded** rather than **unfunded**.

**ASSUMPTIONS**

1) The pension is 1.5% X the number of years of service X the average TNI over the last three years before retirement.
2) The pension is a life annuity with a 50% pension to the surviving spouse and the spouse is three years younger than the pilot.
3) Retirement can occur at any time up to age seventy.
4) Other assumptions: TNI grows at an annual rate of 2.68% ; there is a 5% interest rate.
5) Mortality table used: 94GARU2002

**The annual percentage of TNI that would be necessary to fund the pension during the years of service is as follows:**

| Age at Hire | Retirement age | Annual % of TNI (assume no spouse) |
|---|---|---|
| 35 | 62 | 13.00% |
| 42 | 62 | 14.15% |
| 47 | 62 | 15.02% |
| 52 | 62 | 15.92% |

| Age at Hire | Retirement age | Annual % of TNI (assume spouse) |
|---|---|---|
| 35 | 62 | 14.25% |
| 42 | 62 | 15.51% |
| 47 | 62 | 16.46% |
| 52 | 62 | 17.45% |

| Age at Hire | Retirement age | Annual % of TNI (assume no spouse) |
|---|---|---|
| 35 | 64 | 11.65% |
| 42 | 64 | 12.69% |
| 47 | 64 | 13.48% |
| 52 | 64 | 14.30% |

| Age at Hire | Retirement age | Annual % of TNI (assume spouse) |
|---|---|---|
| 35 | 64 | 12.91% |
| 42 | 64 | 14.07% |
| 47 | 64 | 14.94% |
| 52 | 64 | 15.85% |

The extra cost of a sudden increase in TNI as it relates to pensions is very significant. To give an example, assume someone retires on Dec. 31, 2008 at age 65 with twenty years of service. **Under the current TNI**, increased by 2.68% each year, the monthly pension would be equal to:
(1/12) X (($214,665) X (1.0268 + 1.0268^2 + 1.0268^3) / 3) X .015 X 20 = **$5,659 per month**

**Should TNI rise as prescribed by PSP**, the monthly pension would be equal to:
(1/12) X (($295,00 + $370,000 + 379,916) / 3) X .015 X 20 = **$8,708 per month**

The value of these pensions on Dec 31, 2008 would be:

| | With Spouse | Without Spouse |
|---|---|---|
| Current pension: | $887,929 | $800,913 |
| Under PSP plan: | $1,366,335 | $1,232,435 |

Analysis provided by Albion Actuarial Consulting Inc.

# Comp Day Liability Is Significant

**Current Liability**
According to the Puget Sound Pilots most recently completed Financial Statement and Independent Auditor's Report, total Comp Day value as of December 31, 2005 was approximately **$6,237,252.** We estimate that this represents 9,652 days if this value is based on the 2005 value of one day of net pay.

**Increase of Comp Day Liability in 2005 was Significant**
Activity in 2005 resulted in an increase of **$1,273,224** over the previous year. This represents approximately 10% of overall pilot net income or the equivalent of nearly 5 full time pilots' worth of annual net pay.

**How Does This Relate to TNI and Net Income?**
It appears that the present value of comp days is directly related to net income and therefore TNI. Simply put, if TNI is increased 86% to $400,000 in year two of the PSP plan and net pay follows, then total comp day value reported in 2005 would grow to $11,601,288, adjusted by comp days used or accumulated. This liability is easy to overlook, and we urge the Commission to ask questions about comp day accumulation as it relates to work load and as it relates to financial and unfunded liabilities.

**Comp Day Value Is Not Reflected in Net Pay**
Assignments performed with comp days in 2005 produced revenue that was then distributed to the pilots. This revenue was reflected in the full time net pay of $235,879 each. Without knowing more about comp day accumulation or use, we see the increase of $1,273,224 in 2005 as adding another $25,464 worth of value to each pilot in a single year – this ought to be considered. This is one reason we continue to emphasize a full review and understanding of revenue, income and value associated with completing assignments with off duty pilots.

**Comp Day Relationship to Pilot Staffing**
The use of comp days provides an opportunity to staff below peak demand if done reasonably. It makes good sense and provides a "win/win" situation. When looking at the dollars involved, we believe that comp day incentives are already substantial. However, we are looking at ways that the comp day system could be restructured to potentially move the incentives from the distant future to the immediate present. At the same time, we anticipate that the Commission will be looking more deeply into workload and comp days when determining methodologies for setting pilot levels.

# Pay Comparison and Cost of Living Adjustments

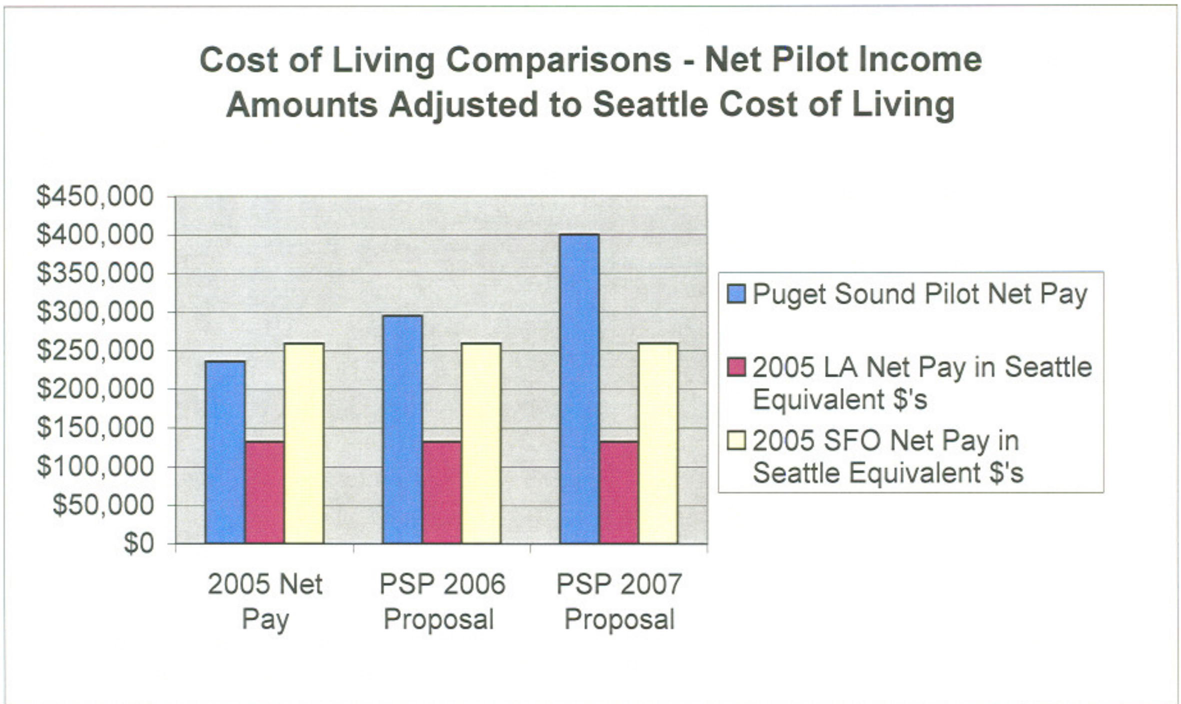
**Cost of Living Comparison Graphs**
The following graphs provide comparisons between Puget Sound, San Francisco and Los Angeles taking into account the cost of living differences. The first chart compares net income for 2005 as well as for PSP proposals in 2006 and 2007. Puget Sound net income clearly exceeds Los Angeles and is on par with San Francisco in 2005. Puget Sound Pilot net income would significantly exceed the cost of living adjusted net income in both Los Angeles and San Francisco if the PSP proposal was fully implemented. It should be noted that due to unusual increases in compensation, the San Francisco pilot tariffs are frozen while industry and the pilots determine what adjustments should be made.

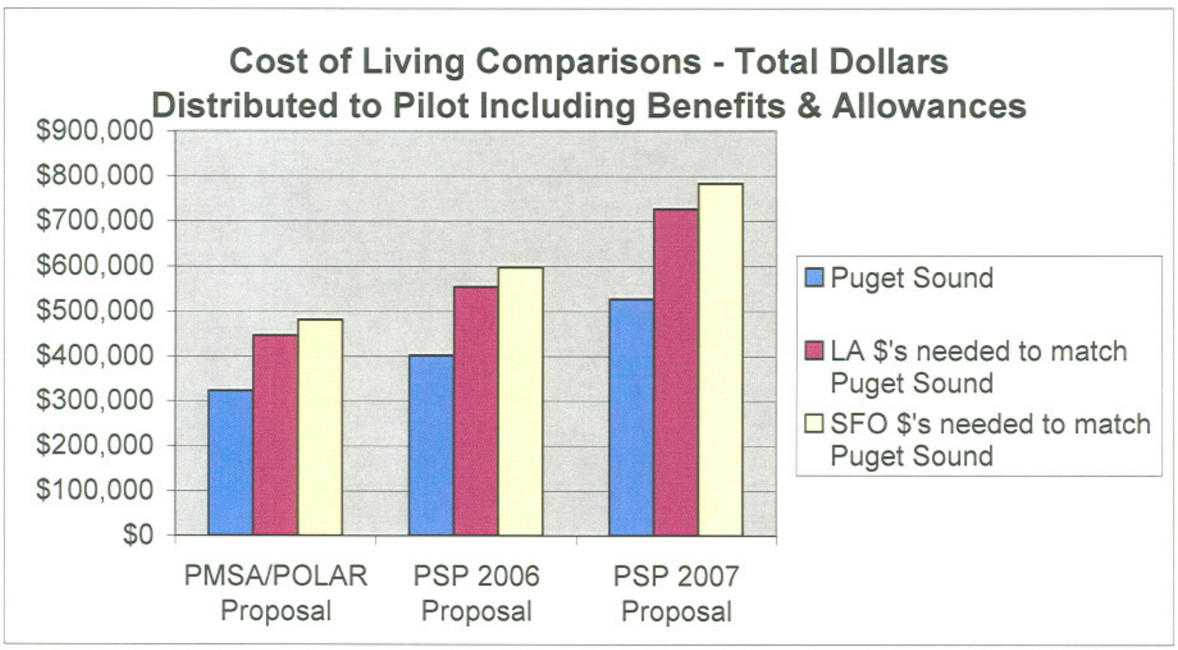
The second graph looks at net income plus all other dollars received by Puget Sound Pilots including benefits, annual pension value, allowances and comp day value (see pension and comp day tabs for more information on these categories). Cost of living adjusted values for Los Angeles and San Francisco are graphed in comparison to the PMSA/POLAR proposal and the PSP 2006 and 2007. The dollar amounts needed to match the PSP proposals range from $554,000 in LA in 2006 to nearly $800,000 in San Francisco in 2007.

**Relative Pay of Other Transportation Related Risk Management Occupations**
We would agree that the maritime pilot is an important element of the maritime risk management equation. So too is the airline pilot an important element in the aviation risk management equation. Airline pilots are directly responsible for the safe operation of the aircraft, most filled with hundreds of people. The median expected salary for a typical Captain/Pilot in command of a large jet in Washington is $113,497[1]. The median expected total cash compensation is $122,301 and the median total compensation including benefits is $159,777[1]. The highest salary for a Continental airline Captain is $180,704[1]. As we have all heard in the news, many airline pilots and other airline workers have taken pay reductions because of the financial downturn in the airline industry.

> Note 1: Salary.com -- Based on market pricing report prepared using Certified Compensation Professionals analyzing survey data collected from thousands of HR departments at employers of all sizes, industries and geographies.

**Puget Sound Pilot Compensation**
As employees for companies competing in the market place, airline pilot compensation is subject to significant reductions as has been recently reported. As the Puget Sound Pilots are independent contractors, not company employees, they are not exposed to individual company financial risks nor are they entitled to directly share in profits during good years. The pilots provide a service for which they are well compensated. We look to the Commission to ensure that their compensation is fair and reasonable regardless of the ups and downs of the industry.




Source: PSP Audited Financials; LA Published Salary & SF Expected Pay for 2005 per PSP
Cost of Living Index Information Source: ACCRA, the Council for Community and Economic Research

# Pilots swallow 'bitter pill'

**JEWEL GOPWANI; Detroit Free Press**

DETROIT – A temporary 24 percent pay cut that Northwest Airlines pilots took in November will stick if the pilots ratify the tentative deal their union reached with the carrier Friday.

The Air Line Pilots Association released some details Sunday about the tentative agreement with the airline, which is based in Eagan, Minn., and reorganizing through Chapter 11 bankruptcy.

The two sides had been negotiating around the clock before reaching a deal Friday afternoon. The tentative deal keeps a bankruptcy judge from having to decide whether he should throw out the pilots' contract and allow Northwest to impose lower wages and new work rules, a prospect that prompted the pilots to threaten to strike. A strike would have shut down the airline and could have put it out of business.

Here are key issues addressed in the deal:

• The agreement keeps the 24 percent pay cut and includes raises of 1.5 percent in 2008, 2009 and 2010, and a 2 percent raise in 2011. The pilots' pay cut falls about 4 percent short of the cut Northwest sought in October, said Wade Blaufuss, ALPA communications chair.

• The 24 percent pay cut is on top of previous wage cuts. The pilots took a 15 percent pay cut in 2004, part of a concessionary deal that saved the airline $250 million a year.

• With the 24 percent cut, a Boeing 747 captain in his 12th year who flies 75 hours a month, a typical schedule, saw his base wage drop from $220.88 an hour in flight, or about $198,700 a year, to $168 an hour, or $151,200 annually. A 12th-year DC9 first officer's base hourly wage dropped from $111 an hour in flight, or $99,900 a year, to $84 an hour, or $75,600 a year.

"It's a bitter pill to swallow," Blaufuss said Sunday. "It's like a grieving process. First, there's feelings of anger and denial, and eventually, some pilots may reach that point of acceptance that this is a necessary sacrifice."

Printed in the Tacoma News Tribune on March 7, 2006

# Northwest Airlines pilots agree to tentative wage-cutting deal

**THE NEWS TRIBUNE** (March, 2006)
Pilots reached a tentative pay-cut deal Friday with Northwest Airlines Corp., a major step toward ending a showdown that put the bankrupt airline's future in doubt.

The Northwest branch of the Air Line Pilots Association announced the agreement but didn't release details. The nation's fourth-largest airline said it got the $358 million in savings it sought.

The deal would still have to be approved by the union's leadership and members. The union said its leaders would meet Friday night to consider the agreement.

Pilots were the last Northwest union without a deal.

Northwest is Sea-Tac Airport's fifth-busiest carrier, serving Minneapolis and Detroit in the continental U.S.

The Associated Press

# WEST COAST PILOTAGE RATE COMPARISONS

"It is the further intent of the legislature **not to place in jeopardy Washington's position as an able competitor for waterborne commerce** from other ports and nations of the world, but rather to continue to develop and encourage such commerce." (RCW 88.16.005)

In striving to provide safe, competent and efficient pilotage for the state of Washington, it is the Pilot Commission's responsibility to strike a balance between the pilots' desires for increased income and the desires of Washington state ports, businesses and consumers to have Puget Sound remain a reasonably competitive force in the market place.

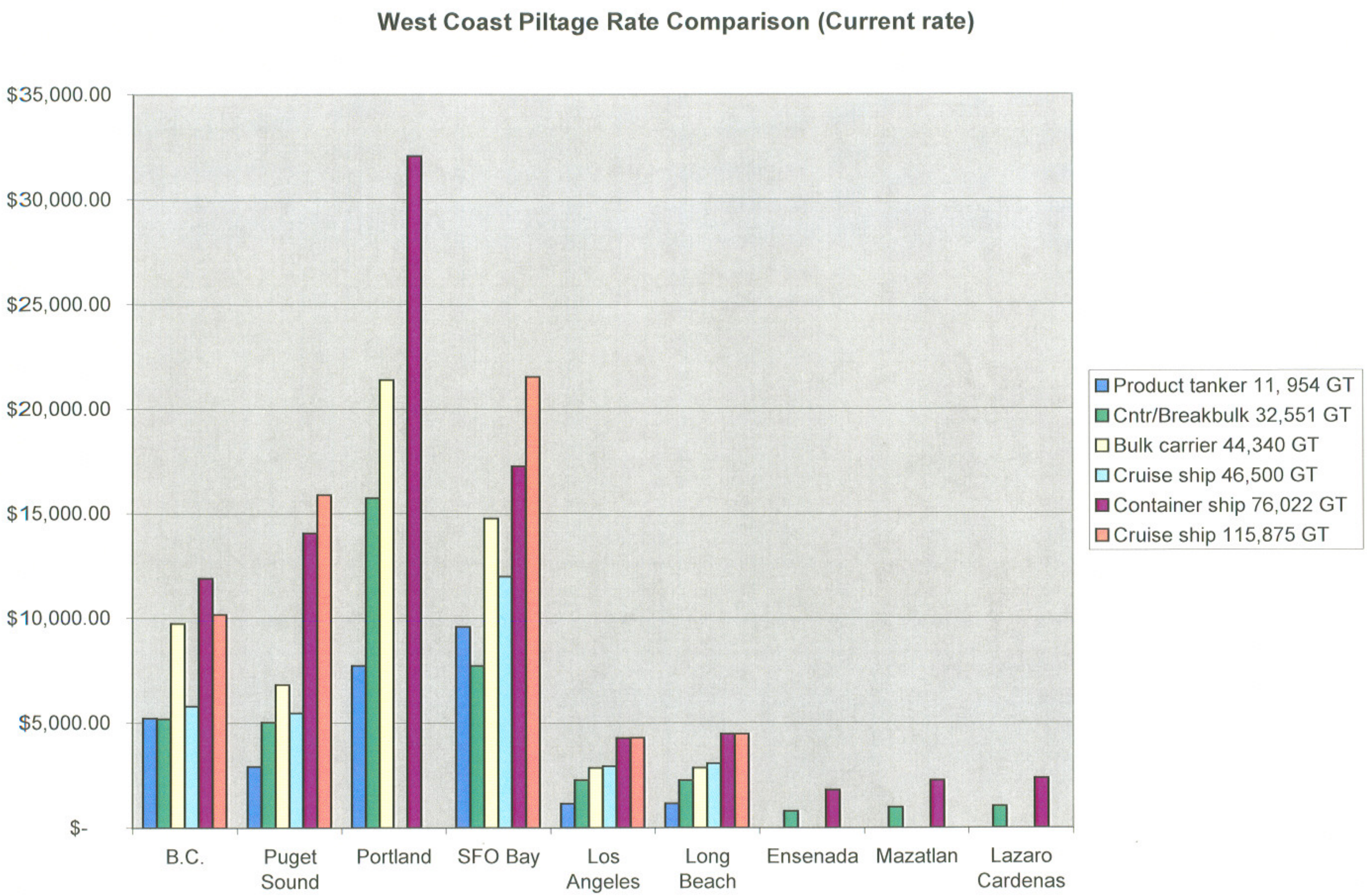
As we are all well aware, Puget Sound is a discretionary port, and we have keen competition for such cargo. Prince Rupert's new container facility is coming on line next year, and Vancouver, B.C. just announced recent growth far greater than Seattle or Tacoma. Southern California remains very competitive with the PNW, and now we are seeing significant investment in Mexican ports just south of the California border. In short, we must always be aware of how we stack up against competing ports in terms of cost, and this is why we include this enclosure.

**West Coast Pilotage Rate Comparison (Current Rate)---**This graph shows the cost of pilotage for six ships ranging in size from a small product tanker to a large cruise ship. The data was compiled from actual pilotage invoices or by calculating pilotage costs based on current west coast published rates. We did not attempt to control destination within each area due to the difficulty of determining comparable ports up and down the coast. Although the sample size is small, it illustrates the competitive disadvantage we have with southern California and how close we are in rates to our B.C. counterparts.

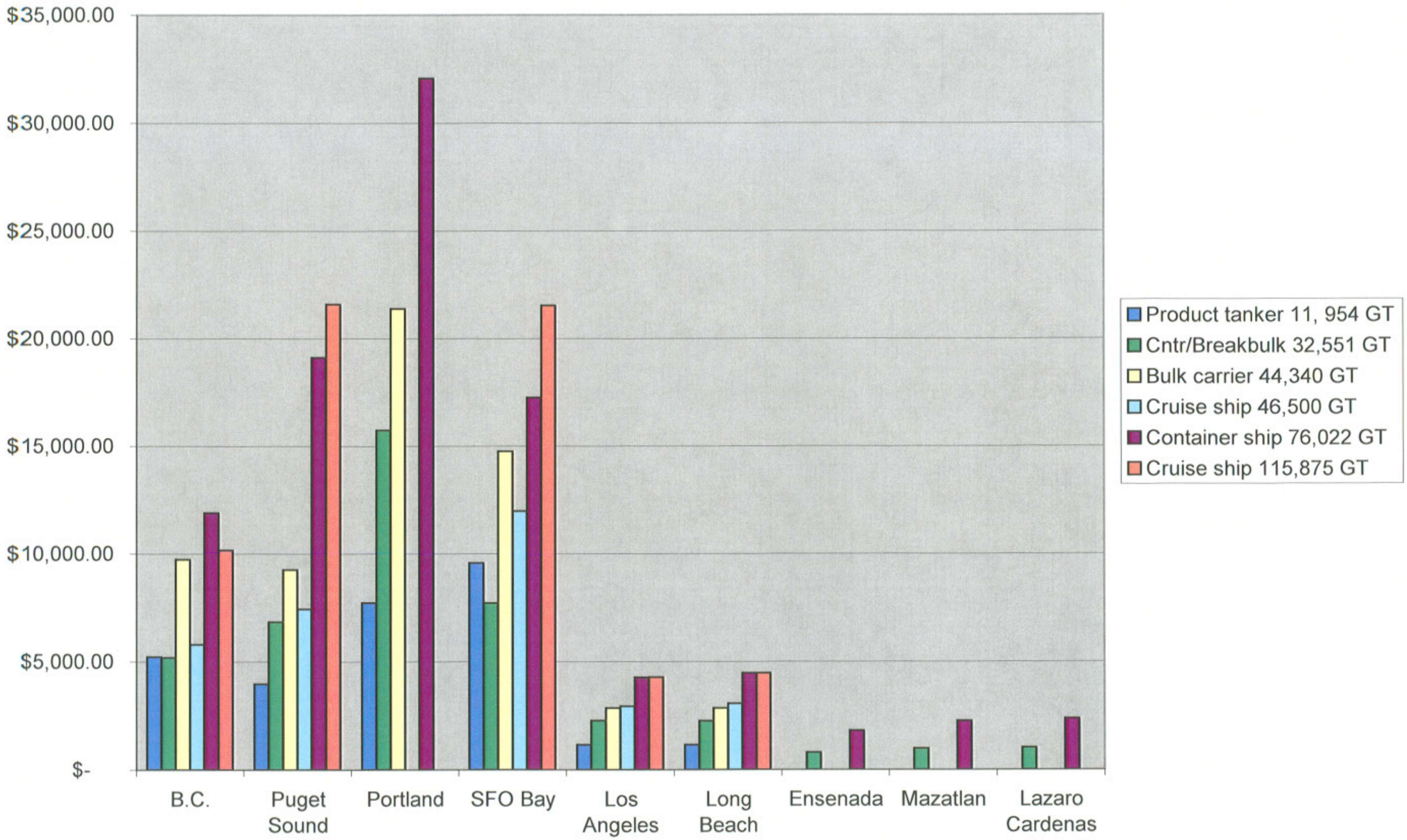
**West Coast Pilotage Rate Comparison (Current rate plus 36%)---**Here we attempt to show the effect of PSP's 2006 proposed rate hike by adding a 36% increase to the Puget Sound data. PSP's proposal actually calls for a 40.92% increase for the tariff year but some of that increase comes from standby and delay penalties. In a graph comparing typical port costs, these charges are inappropriate so we decreased our multiplier to take this into account. Obviously such an increase has a dramatic effect on Puget Sound's position on the chart, particularly for large vessels.

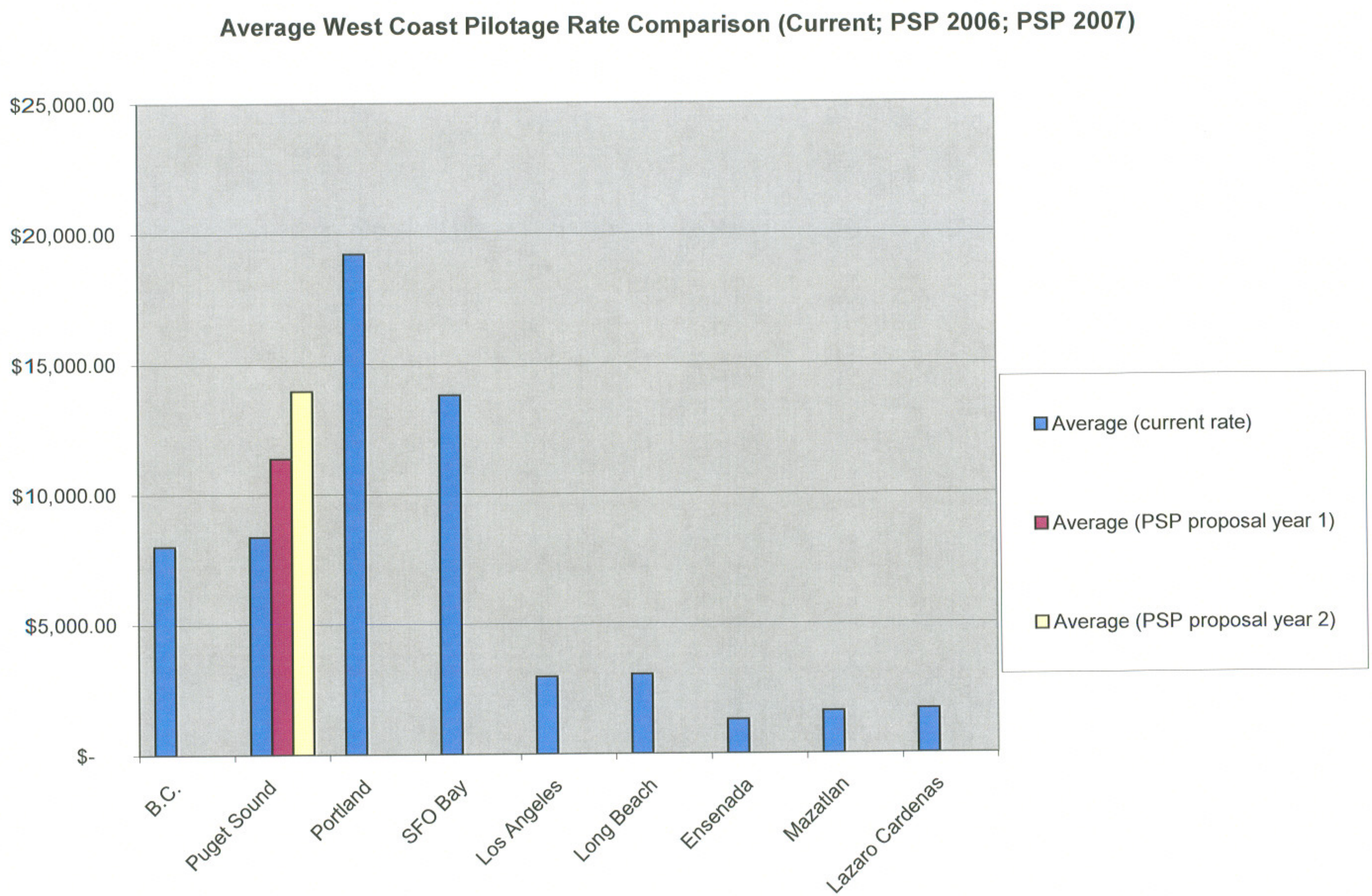
**Average West Coast Pilotage Rate Comparison (Current; PSP 2006; PSP 2007)--**The blue bars are the current average costs for all six vessels at each of the west coast ports. We then took the average of the Puget Sound data increased by 36% (the 2006 PSP proposal), and this yielded the brown bar. We then calculated the 2007 tariff increase based on PSP's request for a TNI of $400,000. This would require a 22.8% tariff increase and would make Puget Sound the second highest pilotage ground on the west coast, all else being equal. While we don't know how other tariffs might change, we do know San Francisco's tariff will remain the same for 2006. Even while revenues were increasing astronomically in San Francisco, their tariff increases did not exceed 6% per year so its unlikely SFO would see a large change in 2007.

**See the following articles regarding competitiveness issues facing Puget Sound ports.**


West Coast Piltage Rate Comparison (Current rate)
$35,000.00
$30,000.00
$25,000.00
$20,000.00
$15,000.00
$10,000.00
$5,000.00
$-
B.C.
Puget Sound
Portland
SFO Bay
Los Angeles
Long Beach
Ensenada
Mazatlan
Lazaro Cardenas
Product tanker 11, 954 GT
Cntr/Breakbulk 32,551 GT
Bulk carrier 44,340 GT
Cruise ship 46,500 GT
Container ship 76,022 GT
Cruise ship 115,875 GT

## West Coast Pilotage Comparison (Current rate plus 36%)




Average West Coast Pilotage Rate Comparison (Current; PSP 2006; PSP 2007)
$25,000.00
$20,000.00
$15,000.00
$10,000.00
$5,000.00
$-
B.C.
Puget Sound
Portland
SFO Bay
Los Angeles
Long Beach
Ensenada
Mazatlan
Lazaro Cardenas
Average (current rate)
Average (PSP proposal year 1)
Average (PSP proposal year 2)

# Prince Rupert port on Canadian National's 2006 budget

Journal of Commerce: Updated 5:03 p.m. ET, Fri Apr 21, 2006

Canadian National Railway plans to invest C$1.5 billion in its network this year, including its share in a container terminal under construction at Prince Rupert, British Columbia, in partnership with the port authority and Maher Terminals.

Hunter Harrison, CN chief executive, on Friday told the company's shareholders meeting in Memphis -- its the first outside Canada -- that the Prince Rupert container terminal will serve as a new North American gateway for imports from China bound for the railroad's four major distribution centers in Memphis, Chicago, Toronto and Montreal, Canadian Press reported.

"There'll be no congestion at the port or on the network," Harrison said. "The potential growth opportunities are immense."

He added that the gateway will also provide an overseas link for U.S. cotton.

The railroad this week said it will spend US$100 million to modernize its Memphis yard, its largest investment outside Canada.

Canadian National on Thursday reported first-quarter net income of US$318 million on revenues of $1.6 billion.

# Drop in February imports through West Coast hubs

Updated 2:22 p.m. ET, Wed Mar 15, 2006

**By Bill Mongelluzzo**
The JOURNAL of COMMERCE ONLINE

LOS ANGELES -- Containerized imports at West Coast ports declined in February due to a drop in shipments from Asia as factories shut down for the Chinese New Year celebration.

Imports through Los Angeles fell 14.4 percent from a year ago, but neighboring Long Beach registered a slight gain of almost 1 percent. Containerized imports declined 4.5 percent in Oakland and 19.9 percent in Seattle.

Shipping executives who addressed The Journal of Commerce's Trans-Pacific Maritime Conference in Long Beach last week said cargo volumes have picked up in March and bookings for April were also strong, so the ports should experience a post-Chinese New Year bounce.

Exports in February were generally strong, up 10.5 percent through Los Angeles and 21 percent at Long Beach. Oakland reported a gain of almost 1 percent while exports through Seattle declined 5.5 percent.

The diversion of cargo away from Southern California ports that began during severe peak-season congestion in 2004 have apparently ended. Hyundai Merchant Marine, which last year re-routed one of its trans-Pacific services from Long Beach to call in Tacoma, announced that the service will return to Southern California in May.

Carriers are expected to start at least two new services to LA -Long Beach this year, and most of the lines calling in Southern California will replace vessels in existing services with larger ships. Industry analysts project a volume increase of 8 to 10 percent in the eastbound Pacific this year.

*Bill Mongelluzzo can be reached at bmongelluzzo@joc.com.*

# Vancouver tops northwest volume

Updated 9:29 a.m. ET, Mon Apr 24, 2006

**By Bill DiBenedetto**

The JOURNAL of COMMERCE ONLINE

SEATTLE -- Vancouver, Canada's largest import gateway, led all Pacific Northwest ports in container volume and also posted the largest across-the-board TEU percentage gains for the region in the first quarter, muscling its way into the traditional rivalry between Tacoma and Seattle.

The British Columbia hub benefited from the booming Asia-Pacific trade and recent carrier service rotation adjustments that have either added Vancouver or made it a first port of call on the West Coast to take advantage of shorter steaming times.

Vancouver's container traffic jumped 17.5 percent from the same quarter a year ago to 476,296 TEUs, a scant 203 TEUs ahead of Tacoma, which saw volume increase 5.7 percent to 476,093 TEUs. However, Tacoma's total includes nearly 108,000 TEUs in the domestic trades to Alaska and Hawaii.

Vancouver's full inbound international containers surged 26.7 percent to 245,612 TEUs through March and full outbound boxes increased 8.1 percent to 183,480 TEUs.

Tacoma's full import boxes increased 6.1 percent to 173,696 TEUs while export containers slipped 6.6 percent to 87,669 TEUs. The port's domestic box traffic fell by 2 percent.

Seattle, which moved the most containers in the region in 2005, saw total volume decline 8.4 percent through March to 452,292 TEUs. The port's imports and exports also declined in comparison to the strong January-March 2005 period, when carriers made rotation changes and diverted shipments from Southern California on peak-season congestion fears.

Seattle's full import boxes declined 6.2 percent to 195,337 TEUs and full export containers fell 10.1 percent to 152,471 TEUs, but still well ahead of rival Tacoma to the south.

The Port of Portland, Ore., continued its recovery from the loss last year of two trans-Pacific container carriers, posting a 7.5 percent increase in volume through March to 38,816 TEUs.

The increase came before the start of new services this month by two carriers at the Columbia River port's Terminal 6, Zim Integrated Services and Yang Ming Line, which will boost volume even more as the year progresses.

Traffic through Portland was more balanced between import and exports, and unlike virtually every other port that handles international containers, it exported more boxes than it imported. Exports totaled 21,804 TEUs, virtually even with the number posted through March 2005, while imports surged 19.3 percent to 17,012 TEUs.

Portland also turned in double-digit increases in grain shipments, up 27.3 percent; breakbulk, up 21.8 percent, and auto units, up 18 percent

# CKYH alliance to reduce capacity to Pacific Northwest

*American Trader – April, 2006*

CKYH alliance members COSCO, "K" Line, Hanjin Shipping and Yang Ming Marine will in the next few months revise their services in the Asia/Pacific Northwest market, reducing annual one-way capacity by about 80,000 TEUs.

Starting May, COSCO and Hanjin will provide four 5,500-TEU containerships to operate on two fortnightly services, the CH-PNW South Loop and CH-PNW North Loop.

The two vessel CH-PNW South Loop will have a port rotation of: Hong Kong, Yantian, Yokohama, Vancouver, Seattle, Yokohama and Hong Kong. The two ship CH-PNW North Loop's port rotation will be: Shanghai, Busan, Seattle, Portland, Vancouver, Kwangyang and Shanghai.

"K" Line's existing K-PNW loop will upgrade from five 4,000-TEU ships to five vessel of 5,500 TEUs. The K-PNW's port rotation will be: Xiamen, Hong Kong, Yantian, Shanghai, Nagoya, Tokyo, Tacoma, Vancouver, Tokyo, Nagoya, Kobe and Xiamen.

Yang Ming's Y-PNW Loop will deploy five 1,800-TEU vessels calling Keelung, Yantian, Kaohsiung, Tacoma, Portland and Keelung.

According to ComPair Data, the global liner-shipping database at http://www.compairdata.com, the CKYH alliance members between them operate four weekly services between Asia and the Pacific Northwest, contributing about 750,000 TEUs in annual one-way capacity. After the changes, the Asia-based alliance will provide about 670,000 TEUs in annual one-way capacity to the trade.

# Property frenzy in Baja California

## As megaport is planned 50 miles south of Ensenada, secrecy surrounds land sales in impoverished area

**By Diane Lindquist**
STAFF WRITER

**April 24, 2006**

PUNTA COLONET, Mexico – After Mexico picked this uninhabited inlet as the site for a new west coast megaport two years ago, beachfront land that held value only to surfers and a handful of fishermen suddenly became hot property.

CHARLIE NEUMAN / Union-Tribune
Punta Colonet is likely to be transformed over the next decade into a megaport that will help to handle the increasing amount of cargo coming from eastern Asia.

Since then, global and domestic business executives, Mexico City lawyers, consultants, engineers and even a former Baja California governor have been beating a path along a pot-holed dirt road from the town of Colonet on the trans-peninsular highway to the water's edge five miles away.

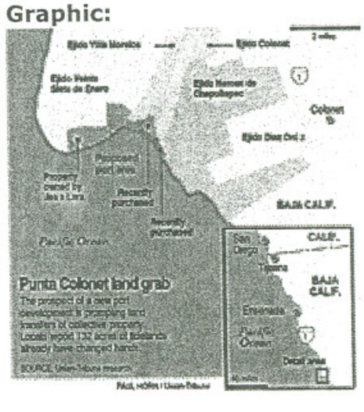
Federal officials have yet to announce a bidding competition, but the project has set off a land grab in this impoverished area 50 miles south of Ensenada.

Buyers have snatched up 132 prime acres along a strip of tideland likely to be transformed over the next decade into docks for container ships arriving from Asia with goods destined for America's heartland.

Former Baja California Gov. Ernesto Ruffo Appel and a partner have bought one such parcel, and also a nearby mountaintop and rights of way to move rock that might be used for the massive project.

"We have purchased 2,500 hectares (more than 600 acres)," Ruffo said. "We've spent about $3 million so far. That shows how serious we are."

Graphic:




Punta Colonet land grab

Additional groups are said to be maneuvering for other choice sites. Secrecy obscures much of the wheeling and dealing.

The Punta Colonet property frenzy is changing life in a rural region populated in part by families who have held the unproductive land for a half century in collective *ejido* arrangements. The influx of cash has split apart communal groups, pitting family against family, brother against brother.

José Luis González learned he was being cut out of a windfall coming to Ejido Villa Morelos last August, a day before 18 other members of the group gathered at a bank to receive checks for selling several parcels of oceanfront property.

González, his brother Rubén and two uncles have since taken their fellow *ejido* members to what is known as an agrarian resolution court, seeking a slice of the proceeds.

"I don't know exactly how much they got. They aren't letting us know," González said recently while taking a break from preparing a cornfield for planting. "But now they're driving fancy cars and wearing nice clothes."

Several sources with knowledge of the transaction estimate that $10 million to $15 million was paid for the land.

"No one is against the development," González said. "We're glad the port's being built because it's needed. We're against how we're being treated."

Numerous individuals refused to be quoted for publication because of the sensitivity of the subject or fear of financial repercussions. Others didn't return phone calls and e-mails. Baja California Economic Development Secretary Sergio Tagliapietra declined to comment through a spokeswoman because he "doesn't want to contribute to the speculation."

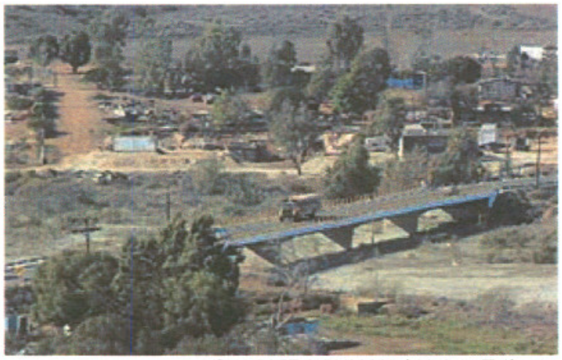
A federal official said the government plans to encourage investors from across the United States and Asia to take part in the competitive bidding process that is expected to start in the next month or two.

## U-shaped port project

The port project is being driven by the inability of other ports, especially those at Long Beach and Los Angeles, to handle increases of cargo coming from eastern Asia. Shipments from there are growing 15 percent annually and are expected to double by 2020.

Punta Colonet will serve only container ships, said Ensenada port director Carlos Jáuregui González, who will be involved with the government's marketing and bidding process. The port will be configured in a U-shape, with each leg having several berths and cranes to handle cargo. One leg will also comprise the project's breakwater.

Nearly 7,000 acres, 97 percent of them water and 3 percent tidelands, will be devoted to the project. A harbor must be dredged deep enough to accommodate several megaships at once.



CHARLIE NEUMAN / Union-Tribune
In Colonet, a bus crossed over the San Rafael River, which empties into the ocean at Punta Colonet when the river is flowing.

Within seven years, Punta Colonet could be processing the equivalent of a million 20-foot-long containers annually, 6 million by 2025.

"It's actually going to be bigger than Los Angeles and Long Beach together," said Albert Fierstine, a consultant who was the Port of Los Angeles' business development director.

Together, those ports handled 13 million TEUs in 2004, or $200 billion worth of cargo. TEU, or 20-foot equivalent units, is the standard measurement in the shipping industry to quantify container traffic.

The port and rail projects are expected to require an investment of $4 billion to $5 billion. But the development of the region, including a city with thousands of inhabitants that would spread farther east into *ejido* lands and support the cargo operations, is expected to attract as much as $22.2 billion in investment.

According to Lara and Ruffo, Hutchison paid about $5 per square meter compared to the average $7 per square meter Ruffo and Ensenada businessman Roberto Curiel Amaya paid Ejido Heroes de Chapultepec for their tideland property.

Initially, Ruffo said, he was acting as a consultant for interested parties but as the project appeared more feasible, he decided to pair with Curiel, a builder with extensive interests in sand, gravel and rock, to play a larger role under a company they formed called Puerto Colonet Infrastructura.

"I will certainly be a bidder," he said. "Now we are trying to put together a consortium."

CHARLIE NEUMAN / Union-Tribune
José Luis González was cut out of a windfall coming to other Ejido Villa Morelos members who sold parcels of property.

Besides the two communal groups that have sold land, three others – Ejido Veinte Siete de Enero, Ejido Diaz Ordáz and Ejido Mexico, which is also known as Ejido Colonet – hold property in the area where the port, railroad and new city are to be built.

It's up to developers to secure land for the port project, said port director Jáuregui.

Property for a 180-mile rail line from the port to Mexicali is likely to be obtained through eminent domain by the state of Baja California, he said. From the port, it is expected to run along the San Rafael River valley north to the border near Mexicali.

## 'Now money's involved'

The Ejido Morelos judicial dispute, Jáuregui said, "could interfere with the project if it is not properly solved."

Once forbidden from selling their land, the collective groups are permitted to do so under a 1992 change in Mexican federal law.

After that change, José Luis and Rubén González and two of their uncles bought a few parcels to farm on their own from the other members of Ejido Villa Morelos, which was formed in 1958.

"Those of us who were cut out of the cake are the pioneers of the *ejido,*" Rubén González said.

"The coastal property that was sold is common area belonging to all (22 members). Nobody complained before, but now money's involved."

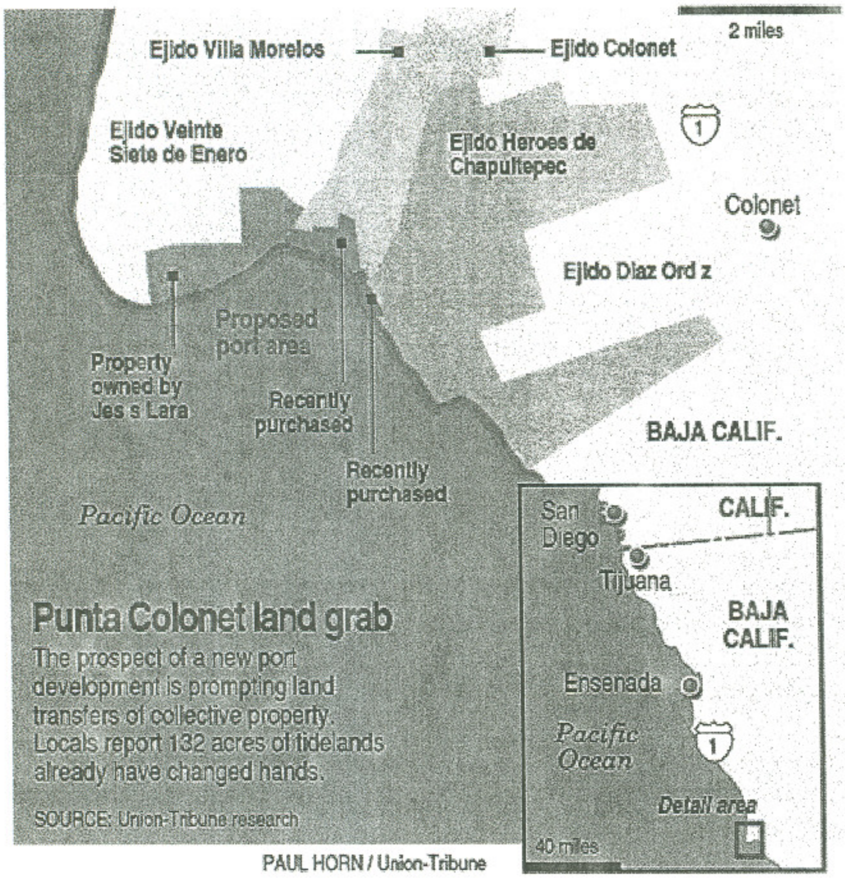
Interest in Punta Colonet continues to grow among visitors and locals alike, Lara said. Representatives of four of the *ejidos* and a group of business leaders from San Quintin, the coastal town to the south, met with him recently to learn what he knows about the project and the land transfers.

Lara has no plans to sell his cliff-top property, which extends to the tidelands below that will make up the bottom of the U-shaped facility.

"I won't sell," he said, "because I can't get now what it's going to be worth eventually."

---

▪Diane Lindquist: (619) 293-1812; diane.lindquist@uniontrib.com




**Punta Colonet land grab**

The prospect of a new port development is prompting land transfers of collective property. Locals report 132 acres of tidelands already have changed hands.

SOURCE: Union-Tribune research

PAUL HORN / Union-Tribune

## The Cyclical Nature of the Shipping Industry

Shipping industry freight rates move in cycles of several years where high rates attract investment in new tonnage which results in over-capacity which results in lower rates and lower profits. Currently, it appears that the current cycle has already peaked and is starting back down. With 700 new container ships being built and launched into service., we are already seeing Trans Pacific rates dropping.

Shipping rates fluctuate markedly as one would expect in an open, competitive market place. Costs are also controlled by the market place. Cargo will move by the best routes possible as determined by reliability and costs. Reliability issues that affect schedules and/or cost increases can and do cause cargo diversion and different choices by carriers and the beneficial cargo owners.

Service providers do not get paid based on what a company can afford to pay at any particular point in a cycle but rather based on the value of the service as dictated by the market.

We have provided a few articles and quotes as well as a recent summary of various freight rates provided by SSY/London to illustrate the cyclical nature of our business.

## Excerpts from Speech at the Faster Freight Conference

**Evergreen Executive – March 2006**

**Significant Investment**

These improvements we believe are important steps in developing a sustainable container shipping industry that our children and grandchildren will depend on and be proud of. But as we have embarked on this mission, we are not blind to the cost.

To give an idea of the cost, I will take our vessels for an illustration. The investment in new features costs an estimated US$5 million for each vessel, plus US$400,000 per year for maintenance. Based on an economic life of 20 years, each vessel is estimated to cost US$13 million additional. There are about 5,500 container vessels sailing the globe today. If we equip all these vessels with the same equipment, the cost will amount to more than US$70 billion.

**This is a huge cost for container carriers – an industry with low profit margins.** As we all know from our industry publications and journals, container carriers are reported to have achieved record profits in 2004. But the "Who's Making Money?" survey of American Shipper magazine reveals an average profit ratio of around 10 percent for this "prosperous" year. During other years, average profit is more or less 5 percent. It is quite clear that container shipping is a low-profit business.

**Industry Cost Concerns**

In addition to the extra cost arising from environmental protection, we also face rising operating costs and maritime security investments.
According to the amendment to SOLAS from the International Maritime Organization, from December 2002 vessel crew, port staff, passengers, cargo owners, vessel owners, port authorities and all concerned maritime parties must work closely to strengthen maritime security. These measures included the installation of new facilities, the increase of minimum crew number from 13 to 17, advanced crew training and more stringent vessel examinations. We also must find a way to adopt new technologies for improving supply chain security, such as electronic container seals, GPS and RFID to monitor and track the movement of containers and shipment integrity. These programs are needed, but also expensive.

In the last 10 years, oil prices have tripled. It is widely believed that the era of high fuel cost has arrived.

The deterioration of the trade imbalance has caused a sharp increase in the cost to reposition empty containers. According to the Journal of Commerce, the container volume from Far East to the U.S. is 1.24 times the volume of cargoes from the U.S. to Far East in 1995. U.S. import container volume doubled that of export in 1999, and as of October 2005, the ratio has jumped to 2.75, revealing a worsening imbalance situation. And now the rail cost of a twenty-foot container move from Los Angeles to Chicago has increased over 50 percent. We have reached a tipping point.

## World Shipping Council CEO Congressional Testimony March 30, 2006 "Cyclicality of International Liner Shipping"

Further, U.S. financial markets have demonstrated little enthusiasm for international liner shipping due to its high capital investment requirements, cyclicality, and intense competition, as well as the fact that other nations' tax laws are more favorable to shipping.
Chris Koch 3.30 Testimony

## Shipping – still a good bet?

Tradewinds
The shipping industry is volatile, cyclical, fragmented, heavily regulated, over capitalised and generally misunderstood but if investors choose carefully it can still be a good punt, according to Bergesen Worldwide Gas (BWGas) deputy chairman Andreas Sohmen-Pao.

Speaking to guests at a Shipping and Energy dinner hosted by the Norwegian British Chamber of Commerce Sohmen-Pao described his feelings on the current market as "happy but nervous."

He explained that the challenge for his and other companies now is that the fundamentals are promising but asset prices are hard to justify and explain over a long period of time.

"That is conundrum shipping companies are facing. How do we reinvest profit making without creating problems for the future? We are feeling that tension now more than ever."

He said: "Investing in shipping can undoubtedly be a very positive experience. The fundamentals are generally still sound. Some of the traditional reasons for avoiding shipping as an investment like volatility, fragmentation, and a lack of understanding may still exist but they are changing for the better."

But he cautioned that if the market comes under pressure the differences between companies will be all the more visible.

Who'll get caught without their kit?"A rising tide has lifted all boats but when the tide begins recede we will start to see who is swimming naked."

**As a shipowner Sohmen-Pao highlighted some of the challenges facing the industry. He spoke of the volatility and cyclicality of the business giving the example of VLCC rates between December 2004 and January 2005 shifting from $250,000 per day to $40,000 per day and back to $100,000 per day in a few weeks.**

But he said: "Volatility can be very rewarding if one is positioned appropriately," adding that it the heightened volatility offered by the shipping market might add some spice to an investors portfolio. .......

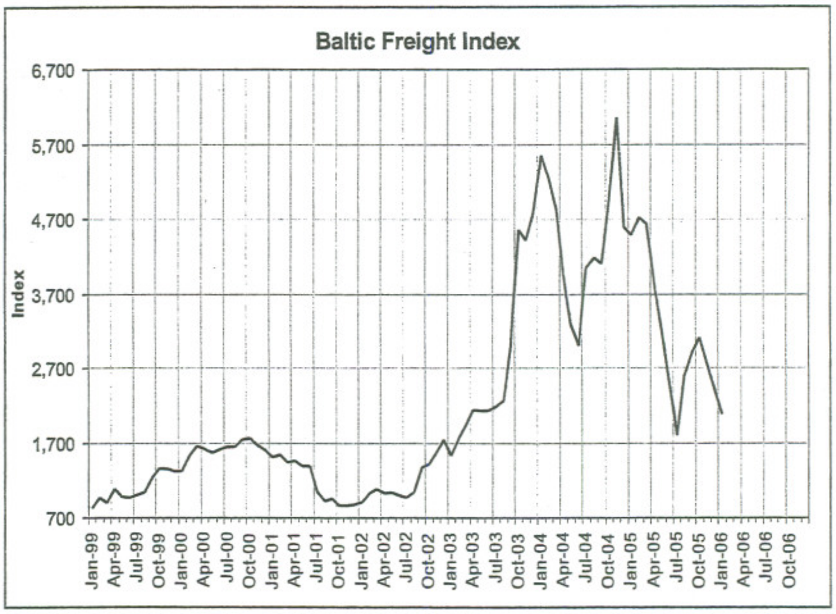
| Representative Rates Last Day of Month | Jan-04 | Jan-05 | Nov-05 | Dec-05 | Jan-06 | 06/05% |
|---|---|---|---|---|---|---|
| BDI (4/1/85=1,000) | 5,551 | 4,488 | 2,770 | 2,407 | 2,081 | -46.4% |
| Grain 55,000 US Gulf/ARA | $40.75 | $37.50 | $21.68 | $20.93 | $17.53 | -44.2% |
| Trans-Atlantic Round - Panamax | $47,225 | $37,456 | $17,817 | $16,630 | $11,467 | -55.6% |
| Grain 52,000 US Gulf/Japan | $70.44 | $60.65 | $42.15 | $39.47 | $32.60 | -34.9% |
| Trip Cont/Far East - Panamax | $53,447 | $41,441 | $22,333 | $19,788 | $13,935 | -52.3% |
| Grain 54,000 NPAC/South Japan | $45.10 | $35.59 | $24.15 | $25.17 | $23.70 | -29.3% |
| Trans-Pacific Round - Panamax | $44,080 | $31,806 | $16,879 | $17,917 | $15,459 | -43.7% |
| TC Trip Far East/Cont 70,000 | $41,393 | $30,328 | $13,172 | $15,406 | $14,297 | -49.2% |
| Iron Ore 150,000 Tub/Rotterdam | $24.87 | $20.97 | $13.58 | $11.33 | $10.93 | -46.0% |
| Iron Ore 140,000 Tub/Beilun+Baoshan | $42.63 | $37.50 | $27.06 | $22.46 | $21.99 | -40.1% |
| Coal 140,000 Richards Bay/Rotterdam | $26.66 | $19.36 | $13.82 | $11.05 | $11.00 | -42.9% |
| 12 Month T/C modern type - 20/25,000 | $17,000 | $18,500 | $10,000 | $10,000 | $9,500 | -45.9% |
| 12 Month T/C modern type - 25/32,000 | $21,000 | $20,000 | $12,500 | $11,500 | $11,000 | -42.5% |
| 12 Month T/C modern type - 40/49,000 | $30,000 | $27,500 | $14,500 | $13,500 | $13,000 | -50.9% |
| 12 Month T/C modern type - 50/56,000 | $35,000 | $31,000 | $16,500 | $15,500 | $15,250 | -50.0% |
| 12 Month T/C modern type - 74,000 | $46,000 | $37,000 | $17,750 | $17,000 | $15,250 | -54.1% |
| 12 Month T/C modern type - 170,000 | $77,500 | $70,000 | $36,500 | $33,500 | $30,500 | -52.1% |
| SSY Superhandymax Index/BSI | $34,254 | $29,055 | $19,334 | $18,350 | $14,622 | -36.8% |
| SSY Atlantic Capesize Index (2/10/89=5,000) | 17,385 | 15,448 | 10,021 | 7,964 | 7,670 | -48.4% |
| SSY Pacific Capesize Index (6/1/97=4,114) | 15,866 | 12,482 | 8,618 | 6,515 | 6,166 | -47.8% |
| 380 cSt Rotterdam/tonne | $129.00 | $158.00 | $250.00 | $262.00 | $296.00 | +65.8% |

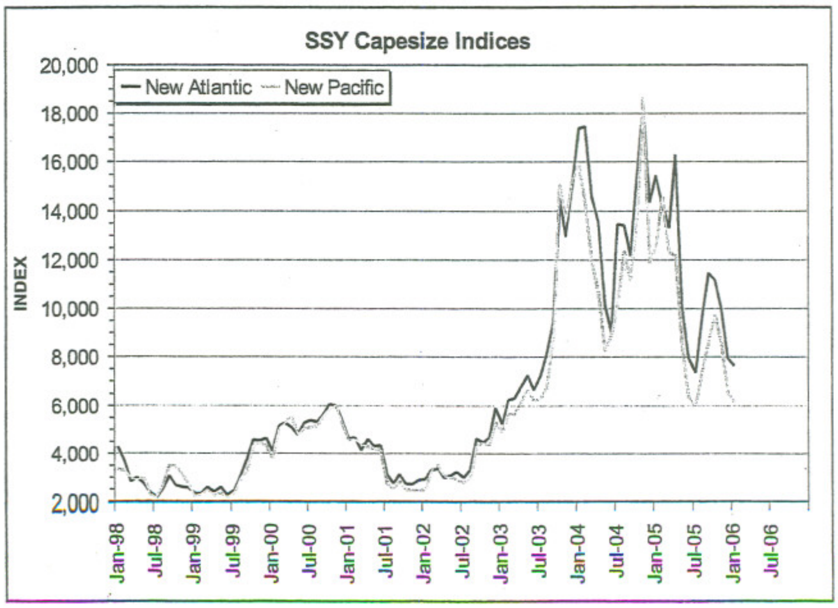
## Trend Reversal or Temporary Spike?

After three months of almost continued decline, freight rates have rallied following the end of the Chinese New Year holidays. At time of writing, the Baltic Dry Index had recorded its longest sequence of daily rises in 6 months and also its biggest daily rise (142 points) since February 2005.

The latest increase has been led by the Capesize sector, where average daily earnings have jumped by 66% since the end of January. While iron ore movements into China ahead of the anticipated rise in annual contract prices have contributed to the higher freight rates, together with firm demand for steam coal, tonnage availability has been strongly influenced by renewed port delays in Australia and China. For example, SSY estimates that at an average of 9-10 days the combined delays at the coal and iron ore terminals of East and West Australia have been at some of their highest levels in the past 2 years.

Inevitably this has had greatest impact on Pacific rounds, which have more than doubled since the start of February (to $48,000/day)



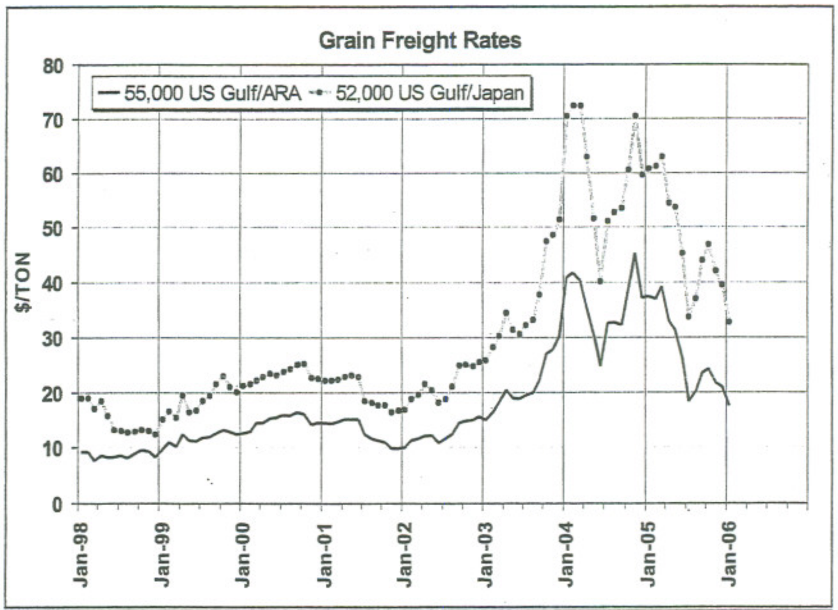
and are now trading at a premium to the transatlantic market.

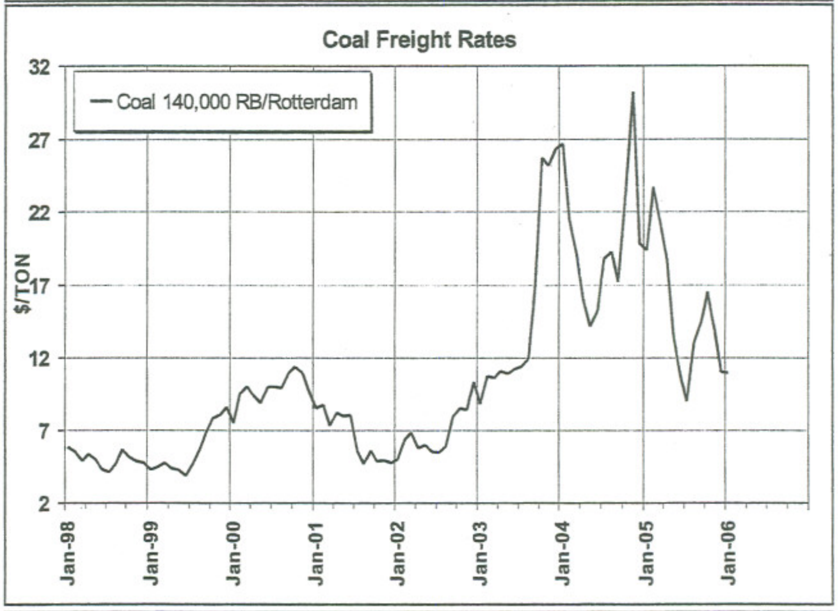
Panamaxes have also risen over the past month, but at a much slower speed than the larger size range and have only just surpassed their mid-January levels. As a result the Cape:Panamax average earnings ratio has widened from 1.7 to 2.7. Ordinarily such a spread would encourage cargo splitting, but current waiting times at key load and discharge ports in the Pacific may act to discourage charterers from such a strategy for the time being.

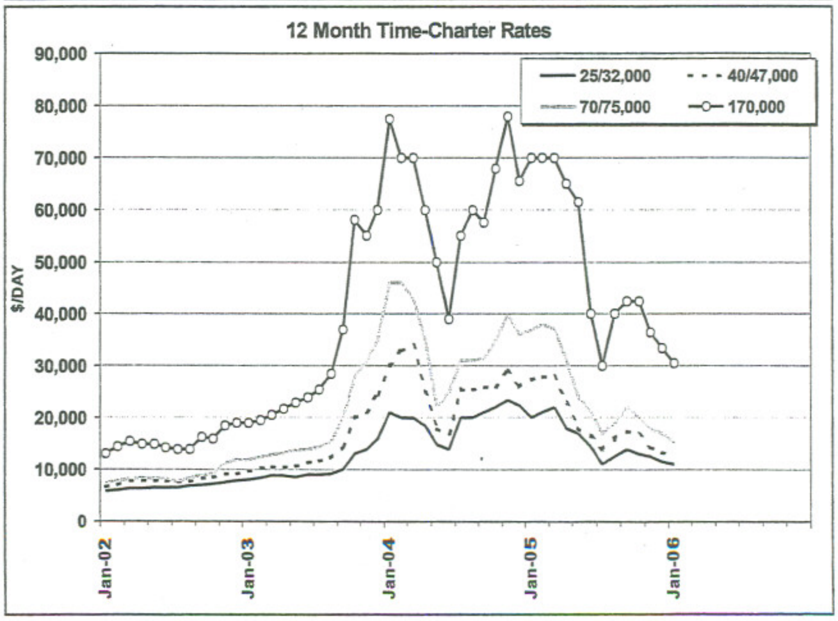
To date, much of the increased Panamax chartering activity has been focussed on short period in the Pacific, but greater strength is now being transmitted to the Atlantic where owners will be looking to the forthcoming Latin American grain season for fresh impetus. However, as outlined on page 8, the prospect is for limited yr-on-yr growth in Latin American exports, especially when compared with the corresponding rises in Panamax and Handymax supply.

Handymax rates have been the slowest to respond to the recent increases, with the Baltic Supramax Index still 8-9% below its mid-January level and average earnings for this vessel type trading at a discount to Panamaxes for the first time since October last year. Such an increase in competitiveness is likely to boost demand for these units.

While the latest upward movements in freight rates have demonstrated that the dry bulk market is not yet in a state of over-supply, the prominent role played by port congestion in tightening tonnage market balances must create doubts as to the longevity of the latest rally. Certainly, with fleet supply continuing to grow at a rapid pace, it could be dangerous to regard the latest increases as a sustained reversal in the downward trend.



THOMAS F. PAUL+
ROBERT W. NOLTING
MARC E. WARNER
DONALD P. MARINKOVICH
DAVID C. BRATZ✧
ERIC R. McVITTIE+
GAIL M. LUHN¤

OF COUNSEL
RICHARD W. BUCHANAN

LE GROS
BUCHANAN
& PAUL

LAW OFFICES
SINCE 1890

701 FIFTH AVENUE
SUITE 2500
SEATTLE, WASHINGTON 98104-7051

CAREY M.E. GEPHART ‡
MARKUS B.G. OBERG
SVETLANA P. SPIVAK •
ROBERT P. ZARKOS

✧ALASKA & WASHINGTON
•OREGON & WASHINGTON
‡ IOWA & WASHINGTON
+ALASKA, OREGON & WASHINGTON
¤COLORADO, KENTUCKY & WASHINGTON
ALL OTHERS WASHINGTON

TELEPHONE: (206) 623-4990
FACSIMILE: (206) 467-4828
INTERNET: seattle@legros.com
WEB SITE: http://www.legros.com

April 19, 2006

Mr. Michael Moore
Vice President
Pacific Merchant Shipping Association
100 West Harrison Street, Suite S 560
Seattle, WA 98119-4135

RE: Pilot Liability Questions

Dear Mike:

As part of the ongoing tariff negotiations, the Puget Sound Pilots ("Pilots") are arguing that they are: (1) subject to greater liability risks; (2) under sharper scrutiny by agencies such as the FBI, the EPA and the Washington Department of Ecology; and (3) facing financial ruin based on the increased liability and lack of either employer or insurer indemnification. You have inquired whether there have been any significant recent changes in either federal or Washington State law increasing the liability exposure of the Pilots. After completing a survey of the law, we conclude that there has been little, if any, change since the last tariff rate negotiations.

The Pilots contend that they now face criminal prosecution for environmental spills occurring on their watch. A review of federal environmental statutes, including OPA and CERCLA reveals, no change in pilot liability. The Oil Pollution Act ("OPA") was enacted in 1990 in response to the Exxon Valdez spill in Alaska. OPA provides liability for all oil spills occurring on navigable waters. Generally liability under the statute applies to the vessel and the vessel's owners. OPA provides a limitation to liability if the vessel owner can show that a third party caused the spill. Under the Federal Water Pollution Control Act, a direct predecessor to OPA, a pilot is not a third party for liability purposes. Rather the pilot is deemed to be the vessel owner's agent and any spills occurring on a pilot's watch are the responsibility of the vessel owner. This policy also appears to apply to OPA as no pilot has been held liable as a third party since the statute's inception in 1990. The Comprehensive Environmental Response Compensation and Liability Act (CERCLA), enacted in 1980, provides liability for hazardous substance spills on navigable waters. Individual liability has been applied to vessel owners and captains, but it has never been applied to vessel pilots. Neither OPA nor CERCLA have been amended since the last tariff was negotiated.

The Pilots also argue that the federal government has recently criminalized simple negligence under 18 USC § 1115. This statement is extremely misleading, certainly as it applies to pilots, and it is clear that the Pilots misunderstand the application of the statute. 18 USC § 1115 was enacted over 100 years ago and cannot be considered a new effort to criminalize negligent behavior. The statute applies to negligence resulting in the death of persons, not for negligence resulting in property damage, vessel damage or environmental damage from oil spills. 18 USC § 1115 does not provide any new or novel areas of liability for the pilots. Further, no pilots have been prosecuted or found criminally liable under this statute.

A review of other civil and criminal federal legislation reveals little to no change in pilot liability since the last tariff negotiations.

Similarly, the Pilots do not face increased liability under Washington State law. In Washington, once a pilot boards a vessel, they are considered to be a servant of the vessel and the owner/operator. RCW 88.16.188 further limits a compulsory pilot's liability to $5000 for damages or loss occasioned by the pilot's errors, omissions, fault or neglect in the performance of their duties. In 2005, the Washington State Legislature expanded RCW 88.16.188 to include all pilot trainees, thus expanding the liability protection pilots enjoy within the state.

In conclusion, although the Pilots argue that their potential exposure to liability has greatly increased in the last year, there has been no actual increase in pilot liability or prosecution at either the federal or the state level. In fact, during the course of our research, we were unable to find any recent cases involving pilots from any state where the pilot was either civilly or criminally prosecuted under State or Federal law. The Pilots' financial despoliation argument is also without merit. The Pilots are not the deep pockets sought to remedy the costs of environmental spills and their liability is limited by Washington State statute for any property or vessel damage caused by pilot negligence.

There appears to be little reason to adjust pilotage tariff rates based solely on theoretical arguments of increased liability and financial ruin.

Very truly yours,

LE GROS BUCHANAN & PAUL

By: Robert W. Nolting
ROBERT W. NOLTING

RWN: js

# PILOT APPLICANT POOL

PSP has argued that there is an insufficient pool of resources from which to attract new pilots. Consequently, the position is made that greater pay is necessary to attract more candidates from this limited pool. In our research, we can find no proof that there is or in the foreseeable future will be insufficient numbers of qualified candidates to apply for pilot jobs here. The recent examination involved 21 candidates with 16 passing and 6 currently training leaving 10 on the waiting list. If there is hard evidence that a shortage exists and that the lack of interest is due to compensation, then the Commission and we will most certainly be interested in seeing it.

We believe the lifting of the requirement for federal pilotage coupled with advertising that includes a full description of duties, benefits, and workload information will attract more than enough highly qualified candidates to this desirable area.

We note that there are five Alaska pilots in PSP or on the waiting list. Captains Sanders, Mork and Anderson are all current members of PSP. Capt. Mork was the most recent entrant having joined the group in July of 2001. Captains Grobschmit and Hannuksela took the exam in November 2005 and are currently on the waiting list to enter the training program. Capt. Grobschmit is in fact the next on the list to enter the program when the Board sees fit to start the next trainee. All five of these pilots are or were members of the Alaska Marine Pilots, LLC group in western Alaska, the same group to which Capt. Moreno belongs. While Capt. Moreno apparently chose not to take the November examination due to "…lower pilot earnings, the workload and the schedule of the Puget Sound Pilots," it appears these factors were not enough to discourage Captains Grobschmit and Hannuksela from taking the exam.

To our knowledge no Puget Sound Pilot applied to become a San Francisco pilot. This is relevant because of statements made by PSP as to how much more attractive the SF pilot situation is. Lastly, even Captain Sweeney, who asked the Commission recently "why would anyone pass up $400,000 to apply here" was unable to answer why she did exactly that.

We find the following information relevant to further discussion of this issue.

<u>**Masters, Mates and Pilots – US Department of Labor on Maritime Compensation**</u>

**Salaries can vary widely depending on the size and type of vessels involved. Captains with many years of experience working on container ships, oil tankers, or passenger ships may earn $100,000 or more each year. Captains of tugboats also tend to earn higher pay that approaches $100,000. Captains in the Washington State Ferry fleet are making in the neighborhood $80,000 with overtime that may bring them closer to $100,000.**

**The U.S. Department of Labor estimates that ship captains, mates, and marine pilots earned an average salary of $52,440 in 2004."**

Economic Incentive: Pilots are compensated at least 4 times the average 2004 salary on record with the DOL; this is without comparing workloads and the attractiveness of the area.

Coast Guard records reflect approximately 16,000 mariners fully qualified to sail. MARAD helps provide a mariner labor pool by operating the U.S. Merchant Marine Academy and supporting mariner training at state maritime academies and industry schools that produce approximately 1200 fully qualified mariners each year.

Tug boat captains and ferry masters have full responsibility for the operation of their vessels and are unprotected by any statutory limitation on liability. They are also responsible for the general administration of their vessel, including employee relations and varying degrees of paperwork. The deep draft master also has employee and paperwork responsibilities and most of their work is at sea for extended periods.

# VESSEL SIZE AND MANEUVERABILITY

There is no doubt that ships are getting bigger, and the vast majority of the bigger ships, being newer ships, are also **state-of-the-art. Many of them have built-in redundancy and propulsion and navigation features that generally make them more maneuverable. This is particularly true when comparing them to older, deep draft vessels that had lower power-to-size ratios, fewer propulsion redundancies and/or protections and were assisted by less capable tugs.** Many of these newer vessels have twin screws and some, particularly the cruise ships with **Azipods**, can turn 360 degrees in their own length. The following are a few examples of the larger, state-of-the-art vessels.

## Totem Ocean Trailer Express (TOTE)

TOTE's new ships were also designed with the environment foremost in mind, with features such as: double hull fuel compartments; state of the art sewage treatment; shoreside trash disposal; fuel efficient, reduced emissions diesel electric system; fresh water ballast system with no discharge to the environment; and **navigation and propulsion system redundancy.**

Propulsion Plant includes:

- Twin-screw diesel-electric with total installed power of 52.2 mW
- Main engines: 4 (each) MAN B&W 9L 58/64 and 2 (each) MAN B&W 9L 27/38 medium speed diesels at 400 and 720 rpm respectively
- The diesel engines are designed to operate on both Heavy Fuel Oil, ISO 8217 Grade RMH 55 or Marine Diesel Oil, ISO 8217 Grade DMC
- The electric propulsion plant is an Alstom 6.6 kV system; each motor is synchronous, variable speed, reversible, brushless, double-wound and rated at 19.75 mW at 125 rpm
- Synchroconverters facilitate starting and speed control of main propulsion motors

Navigation and Communications

- SyShip Route Planning computer system
- Global Maritime Distress and Safety System (GMDSS) Radio System
- 3 radar systems, one 10 cm and two 3 cm systems, all with Collision Avoidance System (CAS)
- Dual adaptive gyro-pilot steering systems

## Endeavor Class Tankers

The next generation in world class crude oil tankers, these vessels started operations in Puget Sound in 2001. Designed and built based on proven technologies, these vessels are not only double hull per OPA 90 but also have major propulsion system redundancy and state-of-the-art control systems.

In addition to the mandated double hull, these vessels are designed with fully independent engine rooms, with **redundant propulsion**, **twin steering systems** and a **separate bow thruster.** This system includes **redundant, controllable reversible pitch (CRP) propellers**, each driven by a separate engine. These CRP propellers can go from **full ahead to full astern in a matter of seconds**. These propellers further **enhance maneuverability** and also allow for **shorter stopping distances** in the event of an emergency. The separate **bow thruster provides extraordinary maneuverability in tight conditions**. At zero speed, the vessel is able to **turn 360 degrees in its own length**.

Completing the redundant design are **two completely independent rudders each with its own steering system**. Besides the redundancy, these rudders also allow the tanker to **turn more quickly particularly in emergency situations**.

These new ships also include the latest navigational tools, including Electronic Chart Display and Information System (ECDIS) and three automatic plotting collision avoidance radars.

Polar Tankers has fully integrated tug boat masters and harbor pilots into its bridge team management training program.

Cruise Ship AMSTERDAM

Propulsion System

- Diesel generators (2 x 11.5 MW / 15,400 Hp & 3 x 8.6 MW / 11,500 Hp)
- Propulsion Electro Motors (2 x 15.5 MW / 20,800 Hp)
- Fixed blade pull Azipod[1] system

Steering Particulars

- **Azipod[1] propulsion** fitted with semi balans rudders
- **Bow Thrusters -- 2 x 1900 kW (2500 hp)** – effective to 8 knots – 6 second delay to full thrust

Cruise Ship OOSTERDAM

Propulsion System

- Diesel generators (3 X 11,520Kw / 46,310 Hp & 2 x 8640 kW / 23,155 Hp)
- Propulsion Electro Motors – Gasturbine ( 1x 14,000 kW / 18,760 Hp)
- **Azipod[1] system**

Steering Particulars

- **Azipod[1] propulsion (2 pulling)**
- **Bow Thrusters -- 3 x 1900 kW (7500 hp)** – 100 % effective until 6 kts

Note 1: The Azipods® are azimuthing electric podded propulsion units that can rotate 360 degrees and are capable of unlimited 360 degree steering. Because of this, the need for rudders is eliminated. The pods contain an AC electrical drive motor coupled to a short drive shaft connected to a fixed pitch propeller. This eliminates the need for any mechanical gearing. **Azipod propulsion units allow huge cruise ships to make a full turn without moving forward.**

Cruise ship DIAMOND PRINCESS

Propulsion System

- Propulsion type: Diesel Electric and Gas Turbine
- Diesel generators: 2 x 9450 kW and 2 x 8400 kW
- Gas Turbine: 1 x 25000kW
- Propulsion Electric Motors: 2 x 20000kW @ 145 rpm
- Full Sea Speed: 22.1 knots (138 rpm)
- Propellers: 2 Fixed pitch keyless type, 6-bladed, inward rotating

Steering Particulars

- Rudders: 2 Mariner Full Spade type
- **Thrusters:** **Bow: 3 x 2200 kW**
  **Stern: 3 x 1720 kW**

# TUG RESOURCES

It has been suggested that tug capability has not increased commensurate with the size and difficulty of maneuvering large vessels. However, bigger ships, also being newer ships, have state-of-the-art propulsion and steering systems, and are themselves more maneuverable. Additionally, tugs have gone from single screw and small horsepower to double screw to a growing mix of propulsion designs that provides more power and capability where and when it is needed.

As reported to Congress in 1998 regarding the International Tug-of-Opportunity System:

> "The Pacific Northwest is the home base for some of the largest and most capable tug and towing companies operating along the Pacific coast of both the United States and Canada. These companies include Foss Maritime, Crowley Marine Services Inc., Seaspan International Ltd, and Rivtow Marine Ltd. Services offered by these large tug and towing operators run the full spectrum of tug and towing activity. Besides these large operators, numerous smaller tug and towing companies operate throughout the area. Many of these smaller operators engage in local harbor assist work whereas others engage primarily in point-to-point towing."

**Foss Maritime:**

Foss operates the most versatile and advanced fleet of tugs in U.S. waters. In the Puget Sound region, Foss operates a fleet of tugs with up to 8,000 horsepower that can safely escort vessels and then dock them at any Puget Sound port.

Enhanced tractor tugs - The Foss fleet includes **two enhanced tractor tugs**. Both tugs feature Voith Schneider **cycloidal propulsion systems**, which are driven by **8,000 horsepower** engines. The enhanced tractor tugs are the largest in the world and were designed specifically for tanker escorts.

Tractor tugs - Foss also operates a fair number of **tractor tugs** with Voith Scheider **cycloidal propulsion systems in the 4000 to 5000 HP range**. The tractor tugs can produce **full thrust in any direction**. Exceptionally maneuverable, the tractor tugs can safely move vessels through confined channels, and are stationed at major ports on the west coast.

**Foss Maritime currently has the following tugs available in Puget Sound.**

| | HP | Bollard Pull | Propulsion |
|---|---|---|---|
| Lindsey Foss | 8000 | 87 tons | Tractor VSP |
| Garth Foss | 8000 | 87 | Tractor VSP |
| Wedell Foss | 5000 | 57 | Tractor Plus |
| Henry Foss | 5000 | 57 | Tractor Plus |
| Pacific Explorer | 4400 | 60 | Tractor ASD |
| Andrew Foss | 4000 | 50 | Tractor VSP |
| Jeffrey Foss | 4300/5400 | 71 | Conventional |
| Barbara Foss | 4300/5400 | 71 | Conventional |
| Emma Foss | 3000 | 41 | Conventional |
| Shelley Foss | 3000 | 40 | Conventional |
| Benjamin Foss | 2150 | 27 | Conventional |
| David Foss | 2150 | 27 | Conventional |

**Crowley Maritime:**

**Crowley owns and operates one of the most advanced fleets of ship assist and escort tugs in the world.** The diversity of the environments and customers Crowley serves demonstrates that versatility is one of their strengths. The fleet stationed in the Pacific Northwest is well prepared to work under the very distinct environmental and physical conditions of the area.

In the North Puget Sound, Crowley assists large tankers into and out of berths and provides both tethered and untethered escort services throughout rugged coastlines and under very extreme weather conditions. Protector and Response Class tugs have been specially designed to efficiently escort and assist tankers in the region, and are equipped with the latest technology in navigation, communications and firefighting equipment.

In Seattle, Tacoma and other surrounding smaller ports in the region, Crowley primarily provides escort and docking services for tankers, container ships and other vessels as they enter and depart from the busy harbors.

In 1994, Crowley operated a harbor fleet of twin-screw tugs:

| | |
|---|---|
| Apollo | 2,000 HP |
| Puerto Nuevo | 2,500 HP |
| Howard H | 3,500 HP |
| Several "Robin Class" tugs | 4,800 HP |
| Several "Invader Class" tugs | 7,200 HP |

In 1995, the lower HP tugs were used less frequently, and Crowley used primarily:

| | |
|---|---|
| Howard H | 3,500 HP |
| "Robin Class" tugs | 4,800 HP |
| "Swift Class" tugs | 5,200 HP |
| "Invader Class" tugs | 7,200 HP |

In 1997, the same classes of tugs were used and the Saturn and Spartan were re-powered to 3,500 HP and added to the fleet.

By June of 1998 the VS Tractor tug Protector (5,500 HP) was operating in Puget Sound

By early 2000, two 4,800 HP VS "Harbor Class" tractor tugs had been added to the fleet, primarily for the Tacoma market.

**For 2006, Crowley has the following tugs available in Puget Sound:**

| | | |
|---|---|---|
| **(1) "Response Class"** | **7,200 HP** | **VS tractor tug** |
| **(2) "Harbor Class"** | **4,800 HP** | **VS tractor tugs** |
| **(2) "Protector Class"** | **5,500 HP** | **VS tractor tugs** |
| **(1 plus[1]) "Invader Class"** | **7,200 HP** | **twin-screw** |
| **(1 plus[1]) "Robin Class"** | **5,000 HP** | **twin-screw** |

**Note 1: Periodically, Crowley has more than one Invader and Robin Class tug available in Puget Sound**