

Des Moines Marina Market/Financial Study

Market Analysis

BST Associates prepared a detailed analysis of marina market trends for the City of Des Moines Marina; this analysis was then used to recommend the appropriate mix of moorage slips at the City of Des Moines Marina.

The City of Des Moines Marina serves a regional market that includes King County and Pierce County. Approximately 98% of current tenants are residents of these two counties, and approximately 21% of all tenants are residents of Des Moines. Future layouts of the marina should reflect the needs of the regional market.

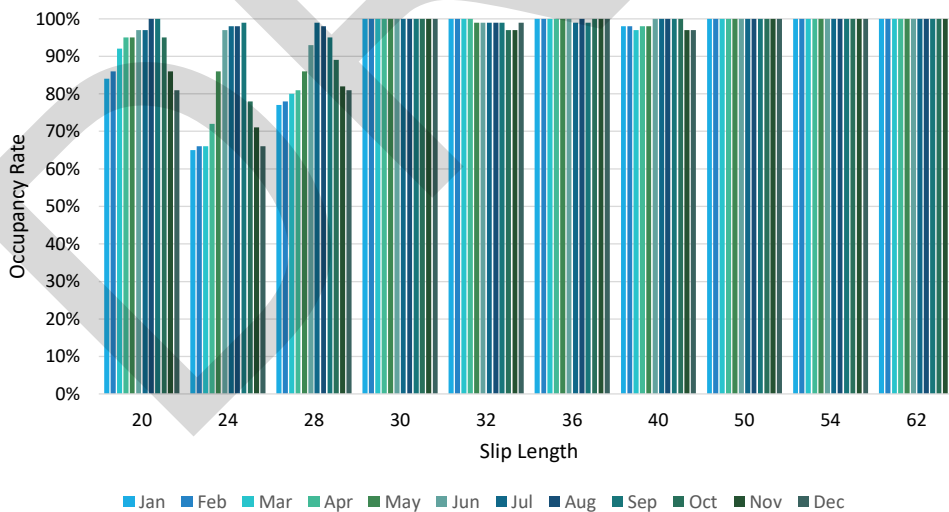
Marina Utilization Rates

The City of Des Moines Marina has a total of 734 slips, including end-ties. Approximately 63.5% of these slips are covered, and 35.5% are open (i.e., not uncovered).

Compared with the regional market, Des Moines has a disproportionate number of smaller slips. Approximately 66% of the existing slips are less than 30 feet long, which is not unusual for Puget Sound marinas that were constructed more than 30 or 40 years ago. However, average boat lengths have increased substantially over time, and the existing slip distribution does not match the recreational fleet in the market.

The result of the mis-match between slip sizes and boat lengths is that annual occupancy is low for slips under 30 feet long. Most smaller boats are easily trailered, which causes vacancies during the off-peak season and negatively impacts financial performance. In contrast, slips that are 30-feet and longer are performing near full-occupancy year-round. (See Figure 1).

Figure 1 – Average Des Moines Marina Occupancy (2017-2020)



In order to accommodate the existing tenant, base the City has allowed overhangs, i.e., boats that are longer than the slips they are in. In some cases, a boat may extend as much as four to five feet past the

end of the slip. However, the farther boats extend past the ends of slips the more they constrict the width of the fairways used to egress/ingress slips. After the marina is reconfigured with longer slips, it is recommended that overhangs be eliminated.

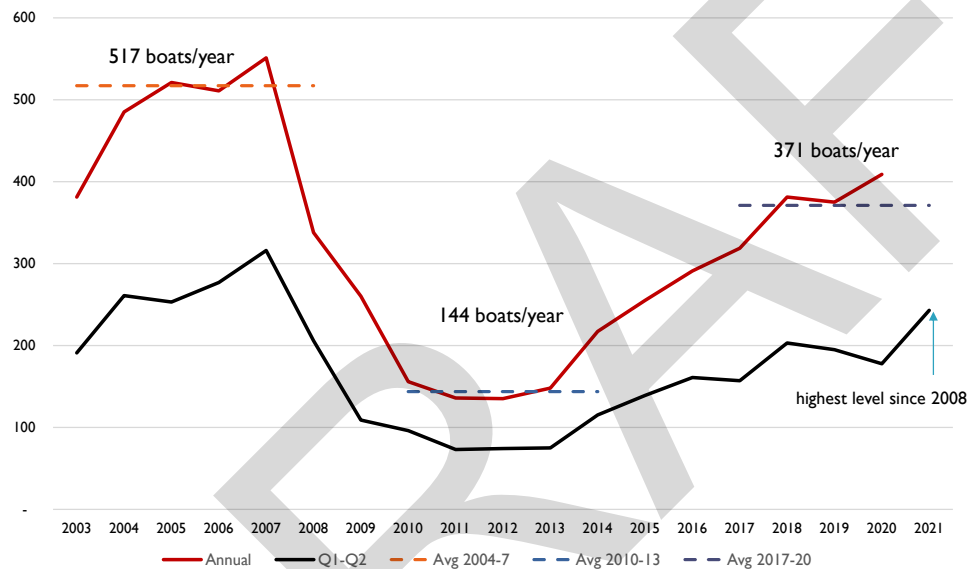
Boating Market Trends and Projections

Boat ownership trends and forecasts are described in this section.

Washington State

New boat sales in Washington have been volatile over the past 18 years, as consumers have responded to economic conditions. New boat sales peaked in the period from 2004 to 2007 at approximately 517 new boats per year. The recession that began in 2008 caused a steep decline in sales that didn't bottom out until 2011, and annual sales averaged 144 new boats from 2010 to 2013. Sales have increased relatively steadily since 2013, and averaged 371 new boats per year 2017 to 2020.¹ (See Figure 2)

Figure 2 – Washington State New Boat Sales Trends by Length (26+ feet)



Source: Northwest Marine Trade Association/SeaGrant using Dept of Licensing data

According to a recent analysis, Covid 19 actually helped to boost boat sales:

- “Originally having busy, packed schedules, boaters and non-boaters didn’t have the time to fit these activities in, spending the little flexible time on other priorities.
- However, the spread of the coronavirus led to flexible schedules, reduced working hours and the elimination of typical activities, offering up free time with few things to do.
- Looking ahead, it will be critical to maintain appeal and remain top of mind to ensure fishing and boating stays in the consideration set of ‘things to do.’²

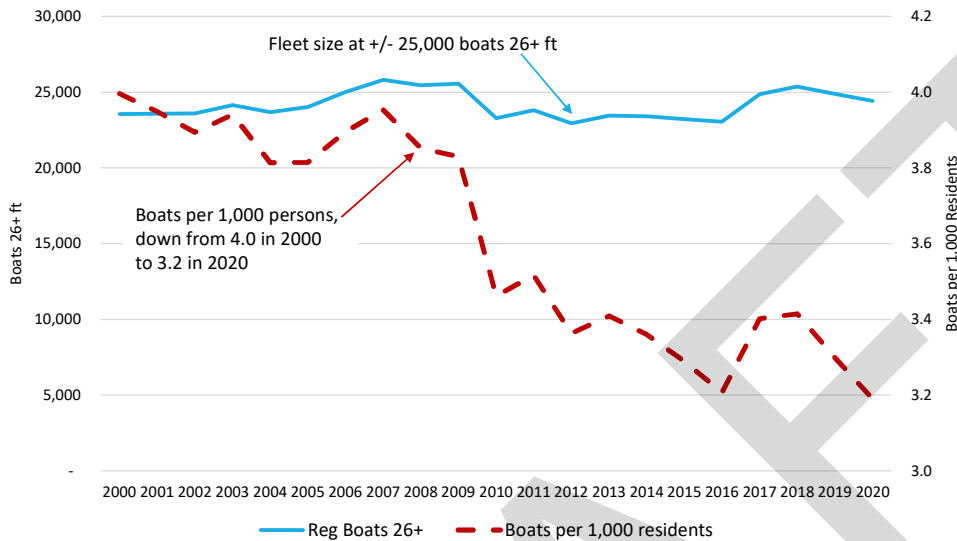
Boats that were purchased new between 2003 and 2020 account for approximately 20% to 40% of the registered fleet in 2020, depending on the length range. As shown in Figure 6, the number of registered

¹ This section focuses on boats that are 26 feet and longer because they represent the majority of boats requiring wet moorage.

² Casting a wide net: Identifying New Anglers & Boaters and Determining Tactics for Retention, TAKEMEFISHING/IPSOS Nov 2020

boats 26 feet and longer in Washington has remained fairly consistent at 23,000 to 25,000 units from 2000 to 2020. Per capita sales of boats 26 feet and over has decreased significantly during this period. Boats per 1,000 persons, decreased from 4.0 in 2000 to 3.2 in 2020. However, the drop in per capita sales was offset by growth in population.³ (See Figure 3).

Figure 3 – Washington State Registered Boats (26+feet) per 1,000 Residents



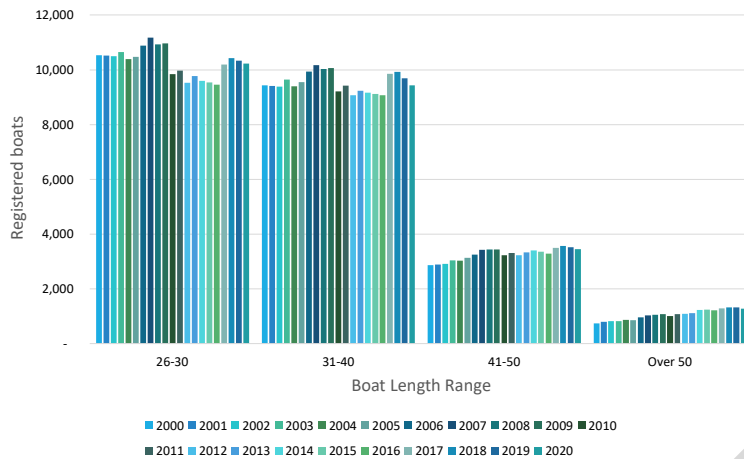
Source: BST Associates using data from Washington State Department of Licensing and the Office of Financial Management

Smaller boats (26 to 40 feet), represent a large share of the recreational fleet, but exhibited little growth in annual registrations during the past 20 years. Longer boats (over 40 feet) showed significant growth. As shown in Figure 4, growth trends in statewide boat registrations from 2000 to 2020 were as follows:

- 26- to 30-foot boats remained stable with little growth (-0.1% per year),
- 31- to 40-foot boats remained stable with little growth (0.0% per year),
- 41- to 50-foot boat registrations increased 0.9% per year, and
- Registrations for boats over 50 feet increased 2.8% per year.

³ The Department of Licensing uses hull length to measure vessel length. Marinas use length overall (LOA), which includes swim steps, bow pulpits, dinghies, motors and other devices protruding from the hull. BST evaluated Des Moines tenants hull length versus LOA and found that, on average, LOA was 10% longer than hull length.

Figure 4 – Washington State Registered Boats – Growth by Length Range



Source: BST Associates using data from Washington State Department of Licensing

Pierce-King County Region

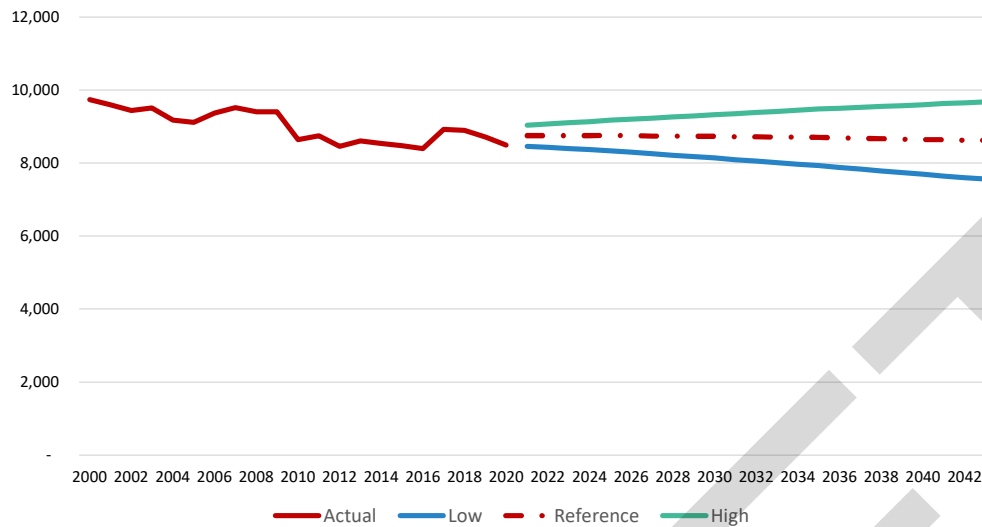
Pierce-King County trends lagged behind those in Washington State, and as a result, the Pierce-King County region lost market share:

- Number of 26 to 30 foot boats declined slightly (-0.9% per year), and market share of Washington State declined by 6.1%
- Number of 31 to 40 foot boats also declined slightly (-0.7% per year), and market share of Washington State declined by 6.8%
- 41 to 50 foot boat registrations increased 0.2% per year, and market share of Washington State declined by 7.7%
- Registrations for boats over 50 feet increased 2.6% per year, and market share of Washington State declined by 1.4%

The forecast for Pierce-King County in 2043 ranges from:

- Low forecast - 7,500 boats, representing a decrease from 2020 of 938 boats,
- Reference forecast – 8,600 boats, representing an increase of 120 boats,
- High forecast – 9,700 boats, representing an increase of 1,200 boats.

Figure 5 – Pierce-King County Registered Boat Forecast (26+ feet)



Source: BST Associates using data from Washington State Department of Licensing and the Office of Financial Management

Two additional factors which will likely impact future boat ownership, are 1) aging out and 2) changing patterns of ownership.

- Age - Boaters have begun aging out and are not being replaced. Continued loss is expected if this trend continues, or core boaters (baby boomers) may become a larger share of the market. Participation by Millennials and GenZ is relatively low.
- Boat Ownership - The average boater uses the boat around 15 days per year, making it a perfect candidate for shared ownership. This market has been growing, including in such services as boat rentals, charters, boat clubs, and fractional ownership. This trend could attract more non-boaters to boating, but shared ownership could also reduce the demand for marina slips.

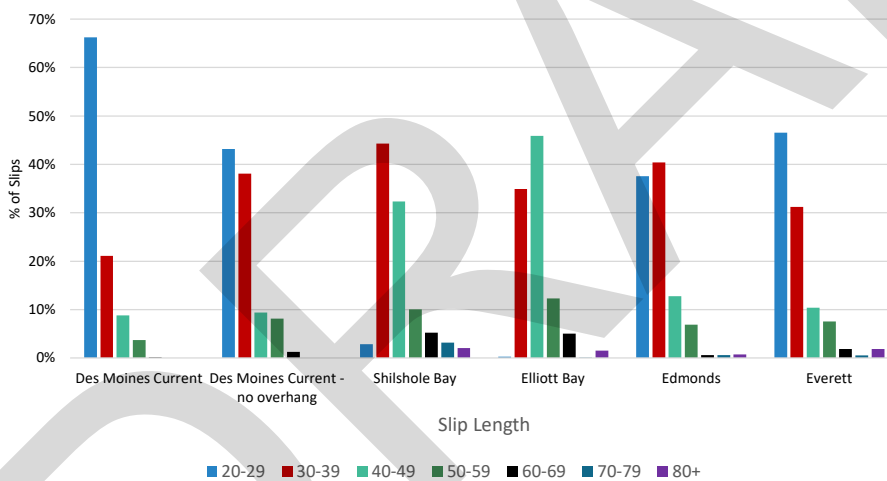
Comparisons with Leading Puget Sound Marinas

The slip characteristics at the Des Moines Marina were compared with four of the largest public marinas on Puget Sound, including Shilshole Bay Marina, Elliott Bay Marina, Port of Everett Marina, and Port of Edmonds Marina.

- Shilshole Bay Marina
 - The Port of Seattle's Shilshole Bay Marina has around 1,400 open moorage slips. The marina was rebuilt in 2009. The reconfiguration resulted in a reduction in the number of 30-foot, 40-foot and 60-foot slips, with additions of slips between 30 and 40 feet (34 and 38-foot slips), between 40 and 50 feet (42 and 46-foot slips), and slips over 60 feet.
 - The reconfiguration gave port staff the ability to shift a boat from a shorter slip to the next longer size to curtail overhangs.
 - The marina has strong occupancy in all lengths and a growing waitlist.
- Elliott Bay Marina.
 - Elliott Bay Marina, which was built in 1989, has around 1,200 open moorage slips. The slip mix focuses on 30 to 39-foot (35% of slips) and 40 to 49-foot slips (47% of slips) with a significant base of 50+ foot slips (17%).

- Elliott Bay occupancy remains full year around.
- Port of Everett Marina
 - The Port of Everett Marina has around 1,800 moorage slips. The older portion of the marina (Central and South sections) have approximately 1,300 open slips and 338 covered slips, which mainly consist of 20-29 foot and 30-39-foot slips. See Figure 5.
 - The newer portion of the marina (North), which was completed in 2005, has 170 slips that range from 40-feet to 70-feet, as well as some longer end-ties.
 - Occupancy at the marina has improved during the past 5 years. Longer slips are nearly always full while some of the shorter slips are vacant during the off-peak months.
- Port of Edmonds Marina
 - The Port of Edmonds Marina is very similar to the Des Moines Marina, with 303 open slips and 363 covered slips. Most of the slips are 20-29 feet and 30-39 feet but there a larger share of longer slips than at Des Moines. The marina was damaged by a storm and rebuilt in 1988/89.
 - Occupancy patterns are similar to Everett, with smaller slips (under 30 feet) experiencing seasonal vacancies and longer slips (30 feet and up) generally full all year around.

Figure 6 – Comparison of Slip Distribution with other Central Puget Sound Marinas



Source: City of Des Moines, public/private marinas

There have been very few new marinas in Puget Sound built during the past 20 to 30 years. Most of the additional moorage capacity in Puget Sound has come from:

- Dry stack storage (i.e., Foss Landing, Twin Bridges, Bayside et al.) serving boats from 20 feet up to 36 or so feet long. The average boat length at these facilities is approximately 29 feet (LOA).
- Large slip marinas serving boats over 60 feet (Ward Cove and Salmon Bay Marine Center, among others).

Some reconfigurations have also occurred at other Puget Sound marinas but the supply has not changed significantly. Shilshole Bay Marina and Elliott Bay marinas represent successful models for the proposed reconfiguration at Des Moines Marina.

Determine the optimal slip mix for the future

The optimal slip mix takes into consideration existing structures that affect the length of new slips as well as the market conditions. At this stage of the analysis, the focus is on total number of slips, which combines open and covered moorage. The viability of covered versus open slips is evaluated in the financial analysis.

Existing Factors affecting Layouts

The existing layout of the marina and phasing requirements constrain the slip distribution of the proposed layouts. Phase 1 is designed to mitigate impacts to slips/activities that are located north and south of the Phase 1 area (transient moorage, K Dock, and Travelift pier, among other items). In addition, it is assumed that two other structures are in place prior to development of Phase 2 (the seawall adjacent to slips K through A needs to be replaced and the dry stack storage facility is constructed).

Determining Optimal Slip Layouts

The recommended slip mix for the reconfigured marina was determined based on several factors:

- Recreational boat fleet in Pierce and King counties (i.e., relative size in 2020 and projected growth from 2020 to 2040).
- Des Moines Marina existing tenant base in 2021 (i.e., required slip sizes based on the existing fleet without overhang).
- Slip mix in the other large salt-water marinas in King County (i.e., Shilshole Bay Marina, and Elliott Bay Marina).

These factors were ranked for each slip length from 30-feet to 59-feet, as shown in Tables 3 to 5 on a scale of 1 to 10 (where 1 is the highest and 10 is the lowest). This process indicates the optimal slips by length range with a slip choice ranging from 1 to 3 in the righthand column (shaded orange):

- 30-39 foot slips – optimal slip lengths are 30-, 36-, 32- and 38-foot,
- 40-49 foot slips – optimal slip lengths are 40-, 42-, and 48-foot, and,
- 50-59 foot slips – optimal slip lengths are 52-, 53-, 50- and 51-foot.

Table 1 – Optimal Slip Lengths for 30-foot to 39-foot range

30-39 foot slips	2040	CAGR	Existing	Puget Sound Leaders		Slip Choice	
	# Boats	2020-40	Tenants	Shilshole Bay	Elliott Bay	Average Ranking	Recommendation
30	1	5	2	1	10	3.8	1
31	2	7	1	10	10	6.0	5
32	5	3	8	10	2	5.6	3
33	3	9	4	10	10	7.2	7
34	10	10	6	4	10	8.0	10
35	9	2	5	10	10	7.2	7
36	4	8	9	2	1	4.8	2
37	6	1	3	10	10	6.0	5
38	7	6	9	3	3	5.6	3
39	8	4	7	10	10	7.8	9

CAGR means compound annual growth rate

Source: BST Associates using data from City of Des Moines, Washington State Department of Licensing and other sources

Table 2 – Optimal Slip Lengths for 40-foot to 49-foot

40-49 foot slips	2040	CAGR	Existing	Puget Sound Leaders		Slip Choice	
	# Boats	2020-40	Tenants	Shilshole Bay	Elliott Bay	Average Ranking	Recommendation
40	2	9	2	1	1	3.0	1
41	3	4	1	10	10	5.6	6
42	5	8	3	2	4	4.4	2
43	6	2	3	10	5	5.2	4
44	1	6	6	10	10	6.6	8
45	10	10	5	10	10	9.0	10
46	8	3	10	3	2	5.2	4
47	4	7	8	10	3	6.4	7
48	7	1	6	4	5	4.6	3
49	9	5	8	10	5	7.4	9

CAGR means compound annual growth rate

Source: BST Associates using data from City of Des Moines, Washington State Department of Licensing and other sources

Table 3 – Optimal Slip Lengths for 50-foot to 59-foot

50-59 foot slips	2040	CAGR	Existing	Puget Sound Leaders		Slip Choice	
	# Boats	2020-40	Tenants	Shilshole Bay	Elliott Bay	Average Ranking	Recommendation
50	2	8	5	1	10	5.2	3
51	4	6	3	10	3	5.2	3
52	1	5	6	10	1	4.6	1
53	3	7	3	10	2	5.0	2
54	8	1	6	10	10	7.0	6
55	7	9	1	10	10	7.4	7
56	10	10	1	10	10	8.2	10
57	9	2	9	10	10	8.0	9
58	6	3	6	10	4	5.8	5
59	5	4	9	10	10	7.6	8

CAGR means compound annual growth rate

Source: BST Associates using data from City of Des Moines, Washington State Department of Licensing and other sources

Comparison with Existing and Proposed Layouts

BST Associates prepared an initial layout assessment of the reconfiguration, using a fairway width of 1.5 and floats in similar east-west lengths as under existing conditions. The analysis resulted in 511 slips with 19,910 lineal feet of moorage. See Table 4.

The typical process in these studies is to develop an estimate of moorage at a planning level and then refine the initial analysis to take into account the impacts from phasing and slip type (covered versus open slips). Moffatt Nichol prepared four alternative layouts based upon the recommended BST Associates slip mix. These improved layouts took into account phasing as well as ensuring overall compatibility of the layouts that ensured proper spacing between the slips, the fairway and the seawall.

Table 6 shows the detailed slip mix and associated lineal feet comparing the layouts by BST Associates and Moffatt Nichol with the existing slip mix and the Waggoner layout.

When marinas are reconfigured, the resulting layouts typically reduce the number of slips and linear feet, when compared with the existing layout. Since there is a reduction in the number of slips, the reduction of slips is greater than the reduction of linear feet. This is the case at Des Moines:

- Slip reduction ranges from -198 slips to -235 slips depending on the layout alternative ranging from 1A (-30.4% loss) to 2A (-32.3% loss)
- Lineal footage reduction ranges from -646 lineal feet to -2,944 lineal feet depending on the layout alternative ranging from 1A (-10.9% loss) to 2A (-13.4% loss).

Market Conclusions

BST Associates finds the differences between Waggoner report, BST Associates and Moffatt Nichol layouts are minor and concludes that the City's approach is sound.

- Focusing on 30-59 foot slips for the reconfiguration is reasonable. These slips are performing well in terms of occupancy.
- All alternatives reduce 20-29 foot slips compared with the existing layout, which are not performing well in terms of occupancy.
 - Dry stack facilities are a successful model for smaller power boats. The City is planning to evaluate this alternative in greater detail.
- Financial analysis (discussed below) further evaluates the viability of the alternative layouts with a particular emphasis on covered versus open slips as well as the financial viability of phased construction.
- There is time to re-evaluate Phase 2 and 3 (for docks A through K) prior to finalizing the concept in the future. Since most of the smaller slips are in floats A through D, this will mitigate the loss of smaller slips in the near-term future.

The increase in market share by the proposed reconfiguration layouts is considered achievable. The existing design of the Des Moines Marina currently accounts for 3.0% of the Pierce/King market for 30- to 59-foot slips. However, the current tenant base (without overhangs) accounts for 3.9% of the market. The proposed layout alternatives would account for approximately 6.0%+/- of the Pierce/King County market for 30- to 59-foot slips.

Table 4 – Comparison of Des Moines Marina Layouts

Length	Number of Slips							Lineal feet						
	Existing Slips	Wagonner	BST	MN 1A	MN 1B	MN 2A	MN 2B	Existing Slips	Wagonner	BST	MN 1A	MN 1B	MN 2A	MN 2B
20	37	-	-	-	-	-	-	740	-	-	-	-	-	-
24	191	-	-	-	-	-	-	4,584	-	-	-	-	-	-
26	-	-	-	8	8	8	8	-	-	-	208	208	208	208
28	254	-	-	-	-	-	-	7,112	-	-	-	-	-	-
30	14	89	68	63	63	63	63	420	2,670	2,040	1,890	1,890	1,890	1,890
32	69	-	126	127	127	123	123	2,208	-	4,032	4,064	4,064	3,936	3,936
34	-	78	-	-	-	-	-	-	2,652	-	-	-	-	-
36	71	-	80	100	75	96	72	2,556	-	2,880	3,600	2,700	3,456	2,592
38	-	92	-	3	27	3	26	-	3,496	-	114	1,026	114	988
40	64	-	52	56	55	54	57	2,560	-	2,080	2,240	2,200	2,160	2,280
42	-	119	27	21	26	21	23	-	4,998	1,134	882	1,092	882	966
44	-	-	-	-	2	-	2	-	-	-	-	88	-	88
46	-	102	-	-	18	-	18	-	4,692	-	-	828	-	828
48	-	-	78	66	66	64	64	-	-	3,744	3,168	3,168	3,072	3,072
50	27	56	80	46	23	44	22	1,350	2,800	4,000	2,300	1,150	2,200	1,100
52	-	-	-	21	21	21	21	-	-	-	1,092	1,092	1,092	1,092
54	2	-	-	-	-	-	-	108	-	-	-	-	-	-
62	3	-	-	-	-	-	-	186	-	-	-	-	-	-
65	2	-	-	-	-	-	-	130	-	-	-	-	-	-
Total	734	536	511	511	511	497	499	21,954	21,308	19,910	19,558	19,506	19,010	19,040
Difference from existing layout														
		(198)	(223)	(223)	(223)	(237)	(235)		(646)	(2,044)	(2,396)	(2,448)	(2,944)	(2,914)

Sources: BST Associates (BST), City of Des Moines (Existing), Wagonner Marine Group (Wagonner) and Moffatt Nichol (MN)

Financial Analysis

The financial analysis evaluates the benefit/cost ratio associated with each of the proposed layouts prepared by Moffatt Nichol.

Current Financial Performance

This section reviews the recent financial performance of the Des Moines marina.

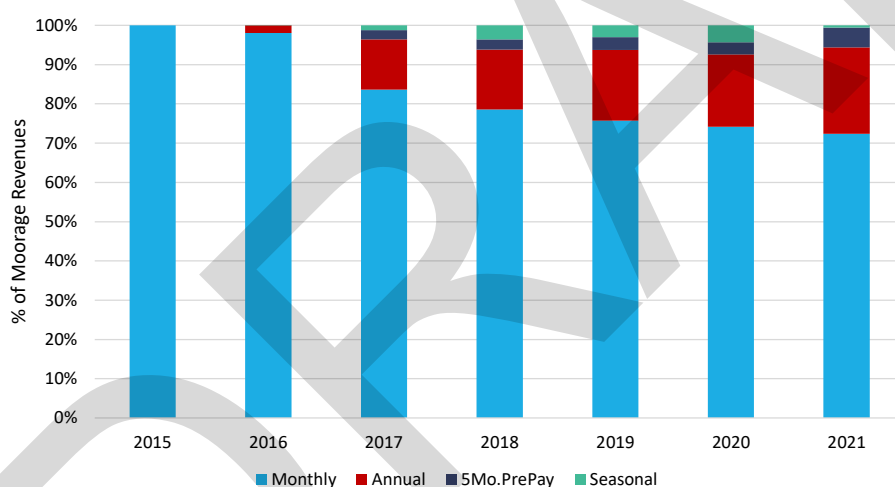
Revenues

Revenues are separated between moorage and other revenues to facilitate the pro forma statements for the four MN layouts.

Moorage is defined to include monthly, annual and seasonal moorage fees but excludes transient overnight moorage, winter moorage and live-aboard fees as well as non-moorage revenues, which are included in other revenues. Moorage revenues, which accounted for 58% of operating revenue in 2020, up from 53% in 2012, grew an average annual rate of 1.8% between 2012 and 2020.

As shown in Figure 12, the share of tenants paying monthly moorage rates has declined from 100% in 2015 to 72% in 2021. This trend has constrained potential moorage revenue. Rate and occupancy trends are described in greater detail below.

Figure 7 – Moorage Revenues – Share by Payment Program



Source: City of Des Moines

Other revenues declined from \$1.9 million in 2012 to \$1.8 million in 2020. Revenue declined primarily due to reduced fuel sales and storage fees as well as to a diversion of parking revenues from the Marina to the Waterfront District.

Expenses

Expenses are categorized in three primary categories: payroll, cost of fuel and other expenses. Payroll costs remained steady at approximately \$900,000 per year from 2012 to 2020. During this period, the number of full-time staff declined from 9 in 2012 to 8 in 2016 but increased to 11 in 2020. Fuel costs declined from \$1.1 million in 2012 to \$800,000 in 2020, due to a drop in price and consumption. Other expenses, which include office operating costs, tidelands lease, utilities (electricity, stormwater, garbage, water and sewer), and insurance, among other categories, increased in the past three years.

Net Revenue and Debt Service Coverage

Net revenue available for debt service increased from \$1.3 million in 2012 to \$1.4 million in 2020, resulting in average annual growth of 0.7%.

A portion of these funds are allocated to capital improvements (CIP). The most recent CIP calls for \$1.5 million for improvements per year from 2021 to 2027. Excluding marina dock replacement and building construction, the average expenditure is budgeted at \$222,000 per year (includes marina dredging, fuel & electrical replacement, tenant restroom replacement, dock electrical replacement, etc.).

Table 5 – Current Financial Performance of the Des Moines Marina (\$millions)

Category	2012	2013	2014	2015	2016	2017	2018	2019	2020	CAGR 2012-20
Revenues										
Moorage	\$2.2	\$2.2	\$2.2	\$2.3	\$2.3	\$2.3	\$2.4	\$2.4	\$2.5	1.8%
Other	\$1.9	\$2.1	\$2.1	\$1.7	\$1.5	\$5.3	\$1.8	\$1.9	\$1.8	-0.8%
Total	\$4.1	\$4.2	\$4.2	\$4.0	\$3.8	\$7.6	\$4.2	\$4.4	\$4.3	0.7%
Expenses										
Payroll	\$0.9	\$0.9	\$0.9	\$0.9	\$0.8	\$0.8	\$0.8	\$0.8	\$0.9	-0.3%
Fuel	\$1.1	\$1.2	\$1.2	\$0.9	\$0.7	\$0.8	\$1.0	\$1.0	\$0.8	-3.7%
Other	\$0.8	\$0.9	\$0.8	\$0.7	\$0.7	\$3.5	\$0.9	\$1.0	\$1.3	5.5%
Total	\$2.8	\$2.9	\$2.9	\$2.5	\$2.2	\$5.1	\$2.7	\$2.8	\$2.9	0.7%
Net Revenue Available for Debt Service										
Service	\$1.3	\$1.3	\$1.3	\$1.5	\$1.5	\$2.5	\$1.5	\$1.6	\$1.4	0.7%
Debt Service	\$0.8	\$0.8	\$0.8	\$0.8	\$0.8	\$0.8	\$0.8	\$0.9	\$0.7	-0.3%
Coverage Ratio (DSC)	1.75	1.63	1.58	1.87	1.86	3.01	1.83	1.82	1.89	

Notes - Per bond covenants:

Min debt service coverage requirement is: 1.25 times the Annual Debt Service

"Net Revenue" means the Revenue from the Marina less the Operating and Maintenance Expense.

(1) "Revenue from the Marina" is defined as all earning except:

- governmental grant proceeds
- proceeds from the sale of property
- city taxes collected by or through the Marina
- principal proceeds of bonds
- interest earnings on arbitrage investments

(2) "Operating and Maintenance Expense" is defined as all current maintenance and repair charges except:

- depreciation
- interest expense
- administrative charges paid to the city

(3) Excludes premium/discount amortizations

Source: City of Des Moines

Debt payments averaged \$800,000 per year from 2012 to 2020. Debt service coverage (defined as net revenues available for debt service over annual debt) averaged 1.9 between 2012 and 2020. The minimum debt service coverage requirement is 1.25 times the Annual Debt Service.⁴

⁴ City of Des Moines Annual Comprehensive Financial Report 2020, page 133.

Cost Estimates

The estimated cost of the proposed layouts is shown in Table 7 by layout option and phase. The replacement schedule assumes that construction occurs in three phases:

- Phase 1 is expected to occur in 2025,
- Phase 2 is expected to occur in 2032, and,
- Phase 3 is expected to occur in 2039.

Table 6 – Construction Cost by Proposed Layout (\$million)

Layout	Phase	Present Value	Future Value		
		2021	2025	2032	2039
1A	1	\$6.3	\$7.0		
1A	2	\$20.1		\$26.8	
1A	3	<u>\$13.1</u>			\$21.1
1A	Total	<u>\$39.5</u>			
2A	1	\$8.9	\$9.9		
2A	2	\$34.6		\$46.2	
2A	3	<u>\$17.5</u>			\$28.1
2A	Total	<u>\$61.0</u>			
1B	1	\$10.5	\$11.7		
1B	2	\$16.2		\$21.7	
1B	3	<u>\$13.1</u>			\$21.1
1B	Total	<u>\$39.9</u>			
2B	1	\$15.5	\$17.2		
2B	2	\$27.2		\$36.3	
2B	3	<u>\$17.1</u>			\$27.4
2B	Total	<u>\$59.7</u>			

The 2021 values, which were estimated at the end of 2021, are used in the benefit/cost ratios in the section. The projected future values assume that construction costs increase at 2.7% per year.

Source: Moffatt Nichol

Financial analysis of reconfiguration layouts

Key assumptions, methodology and findings of the financial analysis of proposed layout alternatives: include: existing and proposed rates, occupancy and inflation.

Rates

Des Moines Marina Rate Structure

This section reviews the trends in the Des Moines Marina rate structure. Table 9 presents the monthly rates at Des Moines marina from 2011 to 2021. Monthly rates for smaller open and covered slips have increased at a rate equal to or less than the CPI rate for the period (2011-2021). Monthly rates for larger slips have generally increase at 0.3% to 0.6% above the CPI rate for the period (2011-2021).

Table 7 – Des Moines Monthly Rate Structure

Length	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Covered											
20	\$8.00	\$8.21	\$8.44	\$8.53	\$8.69	\$8.85	\$9.03	\$9.21	\$9.39	\$9.58	\$9.74
24	\$9.17	\$9.42	\$9.68	\$9.78	\$9.96	\$10.14	\$10.35	\$10.55	\$10.76	\$10.98	\$11.16
28	\$9.91	\$10.18	\$10.45	\$10.60	\$10.79	\$10.99	\$11.32	\$11.66	\$12.01	\$12.37	\$12.57
30	\$9.91	\$10.18	\$10.45	\$10.60	\$10.79	\$10.99	\$11.32	\$11.66	\$12.01	\$12.37	\$13.65
32	\$10.58	\$10.87	\$11.16	\$11.28	\$11.49	\$11.70	\$12.16	\$12.66	\$13.16	\$13.69	\$13.90
36	\$12.05	\$12.38	\$12.71	\$12.85	\$13.09	\$13.33	\$13.86	\$14.41	\$14.99	\$15.59	\$15.84
40	\$12.78	\$13.13	\$13.49	\$13.63	\$13.88	\$14.14	\$14.57	\$15.00	\$15.45	\$15.91	\$16.17
50	\$15.00	\$15.40	\$15.82	\$15.99	\$16.28	\$16.51	\$17.00	\$17.68	\$18.39	\$19.13	\$19.43
Open											
20	\$6.43	\$6.60	\$6.78	\$6.86	\$6.98	\$7.12	\$7.27	\$7.40	\$7.56	\$7.71	\$7.83
24	\$7.21	\$7.40	\$7.60	\$7.68	\$7.83	\$7.94	\$8.10	\$8.26	\$8.43	\$8.60	\$8.73
28	\$7.48	\$7.68	\$7.89	\$7.98	\$8.12	\$8.27	\$8.60	\$8.95	\$9.31	\$9.61	\$9.84
30					\$8.87	\$8.84	\$8.60	\$8.95	\$9.31	\$9.61	\$0.00
32	\$8.17	\$8.40	\$8.62	\$8.71	\$8.87	\$9.04	\$9.40	\$9.77	\$10.17	\$10.57	\$10.74
36	\$8.67	\$8.90	\$9.14	\$9.24	\$9.41	\$9.58	\$9.96	\$10.36	\$10.78	\$11.21	\$11.39
40	\$9.25	\$9.50	\$9.76	\$9.87	\$10.05	\$10.23	\$10.64	\$11.07	\$11.51	\$11.97	\$12.16
50	\$10.45	\$10.73	\$11.02	\$11.15	\$11.35	\$11.57	\$12.03	\$12.51	\$13.01	\$13.53	\$13.74
60	\$10.78	\$11.07	\$11.37	\$11.49	\$11.70	\$11.99	\$12.48	\$12.98	\$13.50	\$14.04	\$14.26

Note: includes leasehold tax

Source: City of Des Moines

The City currently allows a pre-payment annual discount of 18% for boats from 20 to 27 feet and 10% for boats from 28 to 31 feet. The effective weighted average rate of the discount is estimated at approximately 13% lower than the monthly rate for both small open and covered slips.

The discount has a negative effect on the Marina's financial performance but is necessary to improve occupancy in small slips. The financial model assumes that these discounts are eliminated.

Competitive Marina Rate Structure

Several marinas⁵ were evaluated to determine the rate per lineal foot for monthly moorage, defined to include monthly fee plus any additional charges (utilities, environment and other fees as well as taxes). If rates were not available for a certain length, they were estimated based upon the closest rates (i.e., if a 24-foot rate was unknown but 22-foot and 26-foot rates were known then the rate was estimated on the average).

⁵ See Appendix Table 16.

Open Rates

Comparisons for open rates are shown in Table 10 (monthly rates only) and Figure 13 (includes discount rates for smaller boats).

- Des Moines monthly rates for open slips are approximately 12% less across all slips than the average rates of Puget Sound competitors. However, the differential varies significantly by slip length, ranging from +3% to -20%.
- Des Moines monthly rates for open moorage are approximately 26% less than the 90th percentile rates of Puget Sound competitors, ranging from -14% to -36%.

Table 8 – Puget Sound Monthly Marina Rate Assessment – Open Slips

Location	Des Moines Monthly Rates	Puget Sound Competitors		Comparison (DM +/-):	
		Average	Upper 90%	Average	Upper 90%
20	\$7.83	\$9.84	\$12.15	-20%	-36%
24	\$8.73	\$10.25	\$12.94	-15%	-32%
26	\$9.29	\$11.78	\$14.13	-21%	-34%
28	\$9.84	\$10.43	\$13.40	-6%	-27%
30	\$10.29	\$11.48	\$13.88	-10%	-26%
32	\$10.74	\$12.30	\$14.26	-13%	-25%
34	\$11.06	\$13.54	\$16.69	-18%	-34%
36	\$11.39	\$12.81	\$16.29	-11%	-30%
38	\$11.77	\$14.56	\$16.15	-19%	-27%
40	\$12.16	\$13.15	\$16.66	-8%	-27%
42	\$12.48	\$14.31	\$16.47	-13%	-24%
44	\$12.80	\$14.26	\$17.37	-10%	-26%
46	\$13.11	\$13.72	\$16.48	-4%	-20%
48	\$13.43	\$14.51	\$15.65	-7%	-14%
50	\$13.74	\$13.39	\$17.37	3%	-21%
52	\$13.85	\$14.87	\$16.67	-7%	-17%
54	\$14.00	\$16.23	\$18.79	-14%	-25%
62	\$14.26	\$16.87	\$20.12	-15%	-29%
65	\$14.26	\$16.69	\$19.53	-15%	-27%

Note: rates were inferred based on neighboring rates if they were not available for a particular slip length

Source: BST Associates, marinas; 2021 rates

Covered Rates

Comparisons for covered rates are shown in Table 11 (monthly rates only) and Figure 14 (includes discount rates for smaller boats).

- Des Moines monthly rates for covered slips are approximately 12% less across all slips than the average rates of Puget Sound competitors. However, the differential varies significantly by slip length, ranging from +1% to -21%.
- Des Moines monthly rates for covered moorage are approximately 23% less than the 90th percentile rates of Puget Sound competitors, ranging from -11% to -32%.

Table 9 – Puget Sound Monthly Marina Rate Assessment – Covered Slips

Location	Des Moines	Puget Sound Competitors		DM comparison with:	
	Monthly Rates	Average	Upper 90%	Average	Upper 90%
20	\$9.74	\$10.63	\$12.90	-8%	-25%
24	\$11.16	\$12.68	\$14.48	-12%	-23%
26	\$11.87	\$13.16	\$15.09	-10%	-21%
28	\$12.57	\$14.74	\$16.06	-15%	-22%
30	\$13.65	\$13.86	\$15.34	-1%	-11%
32	\$13.90	\$15.77	\$18.61	-12%	-25%
34	\$14.87	\$17.26	\$18.62	-14%	-20%
36	\$15.84	\$17.50	\$19.91	-9%	-20%
38	\$16.01	\$20.01	\$22.32	-20%	-28%
40	\$16.17	\$17.80	\$23.17	-9%	-30%
42	\$16.82	\$19.89	\$24.34	-15%	-31%
44	\$17.47	\$21.99	\$25.51	-21%	-32%
46	\$18.13	\$21.70	\$25.18	-16%	-28%
48	\$18.78	\$21.42	\$24.84	-12%	-24%
50	\$19.43	\$19.29	\$23.82	1%	-18%
52	\$20.08	\$21.35	\$24.97	-6%	-20%
54	\$20.74	\$23.41	\$26.13	-11%	-21%
62	\$23.34	\$29.58	\$29.58	-21%	-21%
65	\$24.32	\$31.64	\$30.74	-23%	-21%

Note: rates were inferred based on neighboring rates if they were not available for a particular slip length

Source: BST Associates, marinas; 2021 rates

Rate assumptions in the financial model:

- Discounts are eliminated.
- Tenants are charged Puget Sound average rates for use of the existing slips during the transition from existing to new slips.
- Tenants are charged Puget Sound 90th percentile rates for use of the new slips.

Other Assumptions

Inflation and Interest Rates

Assumptions for inflation and interest rates are as follows:

- Construction costs inflated at 2.7% per year,
- CPI projected to range from 2.3% to 2.5% per year from 2022 to 2045,
- Rates for existing slips are set at the average of Puget Sound competitors and increase at historical trends,
 - Rates for smaller slips at slightly less than inflation and rates for longer slips at slightly above inflation,
- Rates set at 90th percentile of Puget Sound competitors,
 - Annual increases at CPI plus 1%,
- Other revenues (leases, fuel sales etc.) are projected to grow at CPI
- Cost increases
 - Payroll increase at CPI plus 0.5%,
 - Other expenses (office costs, maintenance and repair etc.) increase at CPI.
- Debt assumed to be GO bonds at approximately 3% interest rate,
- Net present value estimated using interest rates ranging from 3% to 5%.

Occupancy

Occupancy rates for existing slips during the transition are based on existing occupancy rates for the period 2017 to 2020. Occupancy rates for new slips are capped at 90% occupancy.

Benefit/Cost Ratios

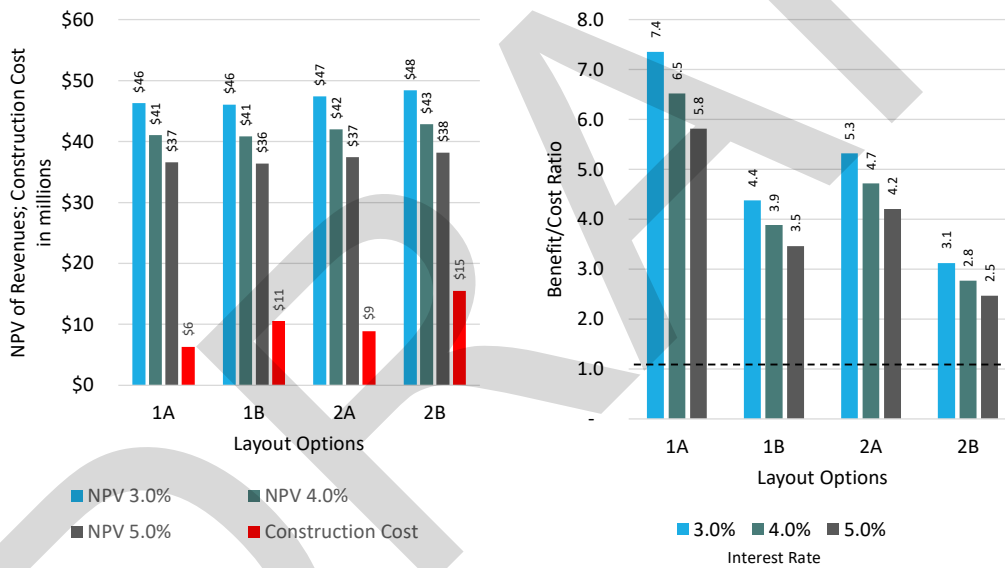
The financial analysis evaluates the benefit/cost ratio (B/C) for each layout through all three phases of development. The B/C ratio is defined as the NPV of the net revenue available for debt service with the associated cost of the project.

- Benefits are defined as the NPV of net revenues (total marina revenues less operating and maintenance costs for the period 2022 to 2045) and discounted at interest rates ranging from 3% to 5%.
- Construction costs were estimated by Moffatt-Nichol.

Phase 1 results

For Phase 1, the benefits (NPV of net revenue) are significantly higher than the Phase 1 cost estimates for all alternatives. All layout options for Phase 1 have a B/C ratio above 1, which is breakeven (NPV of net revenues equals costs).

Figure 8 – Benefit/Cost Ratios (Phase 1)



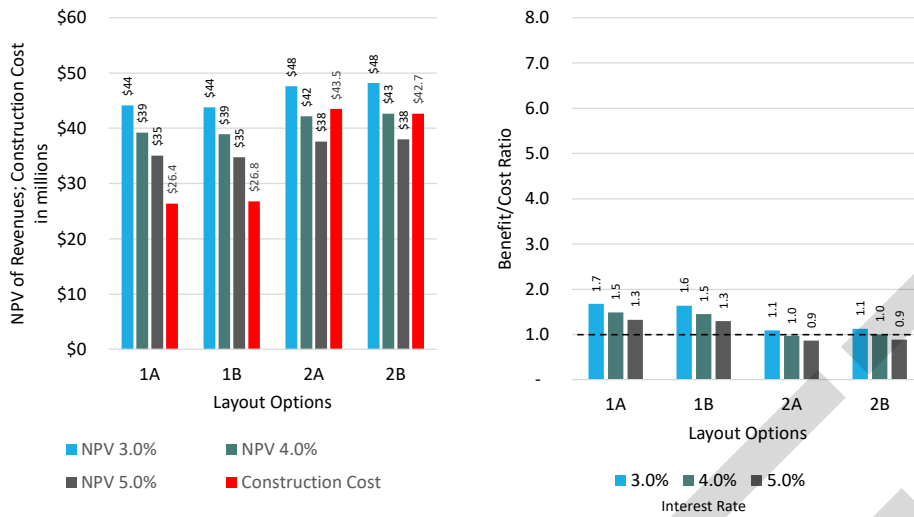
Source: BST Associates

Phase 2 results

For Phase 1 and 2 (combined), construction cost is lower than the NPV of net revenues for open layout options but not for all mixed layout options. B/C ratios are:

- Open slip layout options (1A and 1B) exceed breakeven under all interest rates.
- Mixed slip options (2A and 2B) meet or exceed breakeven at 3% and 4% interest rates but not at 5%.

Figure 9 – Benefit/Cost Ratios (Phase 2)



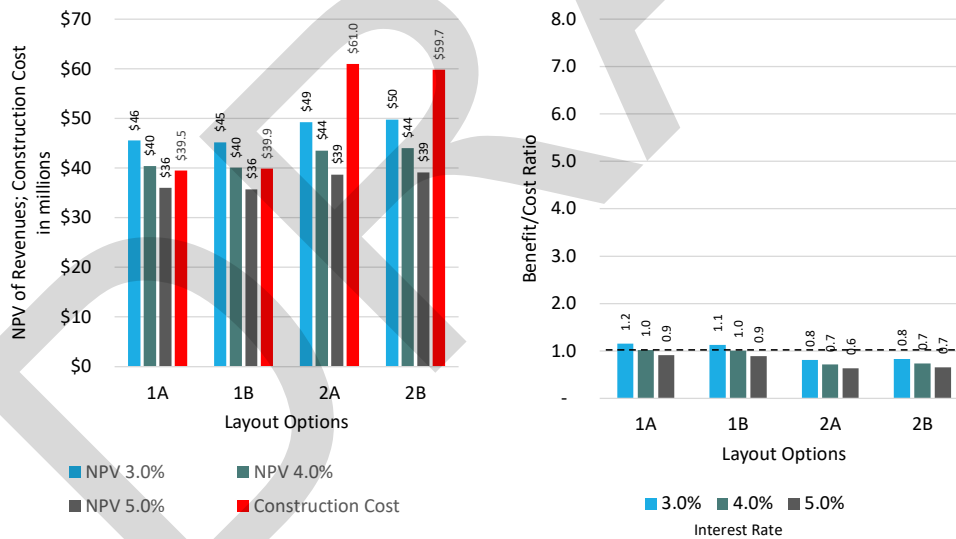
Source: BST Associates

Phase 3 results

For Phases 1, 2 and 3 (combined), the estimated construction cost is higher than the NPV of net revenues for options 2A and 2B and for options 1A and 1B at 5%. *B/C ratios are:*

- Open slip layout options (1A and 1B) meet or exceed the breakeven point at 3% and 4% interest rates and are below breakeven at 5%.
- Mixed slip options (2A and 2B) do not exceed the break-even point under any interest rate.

Figure 10 – Benefit/Cost Ratios (Phase 1)



Source: BST Associates

Covered versus Open Slips

Open slips produce better financial performance than covered slips.

The average cost per slip was estimated by Moffatt Nichol at:

- Open slips - approximately \$77,000
- Covered slips - approximately \$218,000

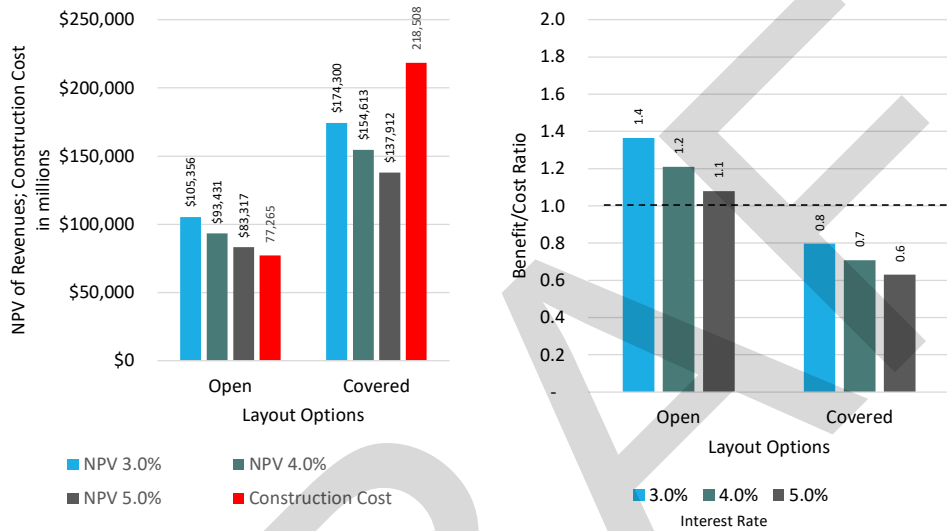
Benefits per slip are estimated at

- Open slips – range from \$105,356 (3% rate), \$93,431 (4% rate), \$83,317 (5% rate)
- Covered slips – range from \$174,300 (3% rate), \$154,613 (4% rate), \$137,912 (5% rate)

Benefit cost ratios;

- Open slips surpass the break-even point with all interest rates.
- Covered slips do not meet the break-even point with any of the interest rates.
 - The rates for new covered moorage would need to be approximately 39% above current monthly covered rates to break-even.

Figure 11 – Benefit/Cost - Covered vs Open Slips



Source: BST Associates, Moffatt Nichol (costs)

Financing

This section reviews potential financing methods.

LTGO Bonds

City of Des Moines Marina improvements have been traditionally undertaken using LTGO (Limited Tax General Obligation Bonds), which are backed by the property taxes of the City, but paid using net revenues from the marina. As noted above, marina debt payments averaged \$800,000 per year from 2012 to 2020. Existing debt is paid off in 2022 and 2028.

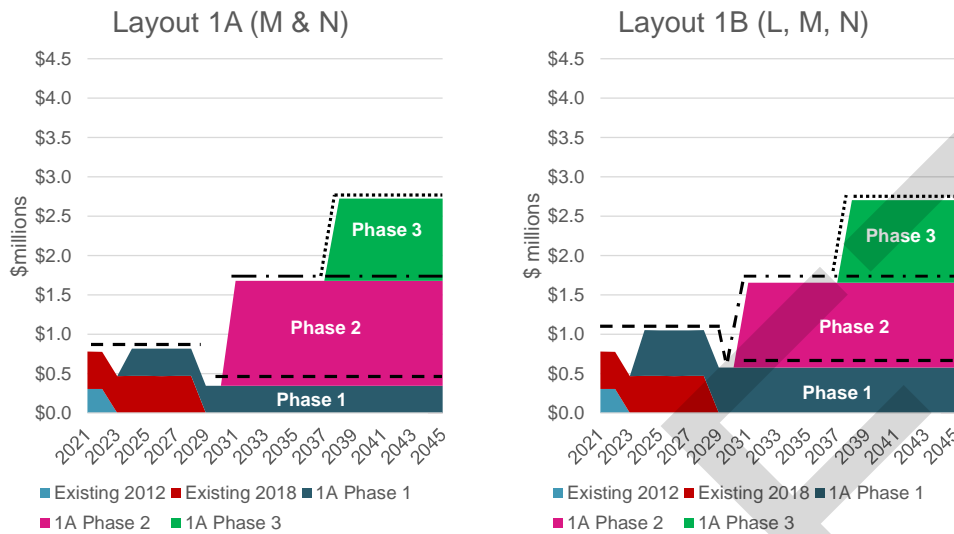
Open Slip Layouts

If LTGO bonds are used to pay for the debt, the expected debt per phase of construction for the open slip layouts, based on 30-year bonds at 3% interest, is as follows:

- Phase 1: \$350,000/year (1A); \$580,000/year (1B)
- Phase 1 & 2 Cumulative debt: \$1.7 million/year (1A): \$1.7 million/year (1B)
- Phase 1, 2 & 3 Cumulative debt: \$2.7 million/year (1A): \$2.7 million/year (1B)

Phase 1 is achievable under the City’s requirements and could be increased. However, accommodating the cumulative debt for Phase 2 and 3 are not achievable.

Figure 12 – Debt Service for Open Slip Layouts



Source: BST Associates, Moffatt Nichol (costs)

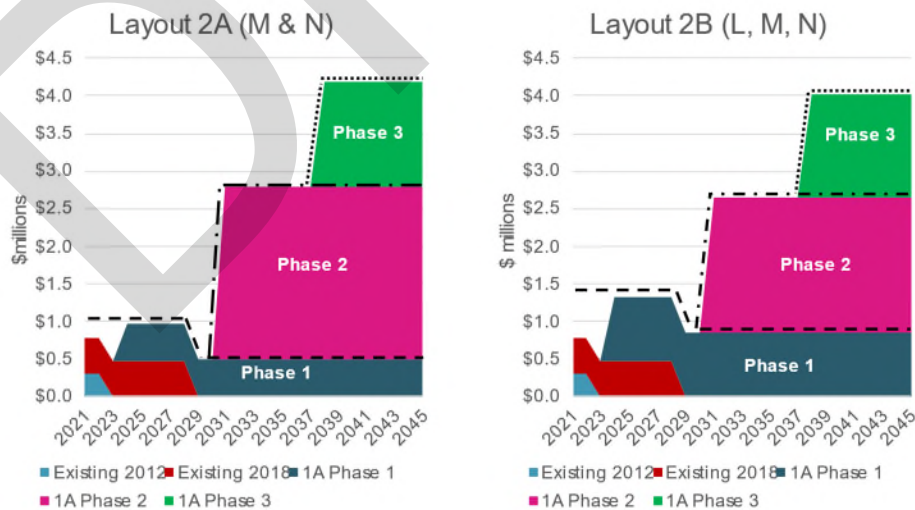
Mixed Slip Layouts

If LTGO bonds are used to pay for the debt, the expected debt per phase of construction, based on 30-year bonds at 3% interest, is as follows:

- Phase 1: \$490,000/year (1A); \$860,000/year (1B)
- Phase 1 & 2 Cumulative debt: \$2.8 million/year (2A); \$2.7 million/year (2B)
- Phase 1, 2 & 3 Cumulative debt: \$4.2 million/year (2A); \$4.0 million/year (2B)

Phase 1 is achievable under the City’s requirements and the project size (number of floats). However, accommodating the cumulative debt for Phase 2 and 3 are not achievable.

Figure 13 – Debt Service for Mixed Slip Layouts



Source: BST Associates, Moffatt Nichol (costs)

Finance Conclusions

Rebuilding the City of Des Moines Marina is an expensive undertaking, ranging from \$30 million (open slips) to \$60 million (mixed slips).

None of the layouts meet all of the City financial requirements through all three phases of development but the open slip options are much closer than the mixed slip options.

- Phase 1
 - All Layouts meet financial requirements (B/C ratio equal to or greater than 1)
- Phase 2
 - All open slip Layouts (1A and 1B) meet financial requirements
 - Mixed Layouts (2A and 2B) meet financial requirements if interest rates are 3% or 4% but not 5%
- Phase 3
 - Open slip Layouts (1A and 1B) meet financial requirements if interest rates are 3% or 4% but not 5%
 - Mixed Layouts (2A and 2B) do not meet financial requirements under any interest rate.

Phase 2 and 3 require additional infrastructure that is not included in the cost estimates:

- Seawall reconstruction
- Drystack building

We recommend proceeding with Layout 1B in Phase 1 of construction (L, M, and N docks)

- Maximizes the number of slips replaced in Phase 1
- Meets market and financial requirements

There is time to re-evaluate Phase 2 and 3 (for docks A through K) prior to finalizing the concept in the future. The City could also consider other options for supporting marina development:

- Privatization
- Allocation of other City revenues to marina construction (leasehold excise and sales taxes)
- Grants, among other funding sources

Appendix

Table 10 – Marinas included in Moorage Rate Comparison

Open Moorage:

- Arabella's Landing
- Foss Harbor Marina
- Hylebos Marina
- Marina at Browns Point
- Delin Docks
- Dock Street Marina
- Chinook Landing
- Elliott Bay Marina
- Shilshole Bay Marina
- South Park Marina
- Harbor Island Marina
- Fishermen's Terminal
- Salmon Bay Marina
- Carillon Point Marina
- Edmonds Marina
- Everett - Main and North Marinas
- Anacortes Marina
- Cap Sante Marina
- La Conner Marina

Covered moorage:

- Marina at Browns Point
- Narrows Marina
- Tye Marina
- Salmon Bay Marina
- Stimson Marina
- Edmonds Marina
- Everett Marina
- Anacortes Marina
- La Conner Marina