# Acme Township Marina Economic Analysis

Addendum, June 7, 2011
Operational Expense Analysis, Slip Mix Variable Assessment, and Alternative Park Scenarios

Acme Township

Edgewater resources

## INTRODUCTION

This report addendum provides additional detail and scenarios in response to questions and comments raised during the presentation to the Acme Township Planning Commission on May 23, 2011. It outlines in greater detail the operational expense breakdown, including dredging costs. Additionally, this addendum provides additional analysis of the potential positive impacts on the financial analyses that may occur if a more optimistic slip mix is realized based on actual waiting list requests. This document also considers two additional potential alternatives to a municipal marina, including a "Park Only" alternative, and a "Park / Launch" alternative that exclude seasonal or transient slips. These alternatives are reviewed at the conceptual level, with costs and operational analyses prepared using the same factors and assumptions that were used for the marina alternatives, with the intent of providing a meaningful "apples to apples" comparison.

## Operational Expense Analysis

The expenses indicated in the financial assessment of the various phases are based on actual documented expenses at existing marinas within the region, and are consistent with our expectations based on more than thirty years' experience designing, operating, and analyzing marinas in the Great Lakes.

Phase One Operational expense budget includes the following:

| | |
|---|---|
| Insurance @ $100 per slip: | $ 2,200 |
| Utilities @ $100 per slip: | $ 2,200 |
| Maintenance @ $75 per slip: | $ 1,650 |
| Dredging Fund: | $ 6,200 |
| Wages (Shared Cost of EBHC staff): | $12,500 |
| Administration / General: | $ 8,500 |
| Total: | $33,250 |

## Dredge Cost Assessment

Estimated dredging costs are based on the last three dredge projects completed by East Bay Harbor over the last ten years. According to East Bay Harbor staff, approximately 2,500 cubic yards have been dredged on three separate occasions since the late 1990's. The majority of the dredging is in the outer channel, with only one third of the most recent dredging project completed within the enclosed basin itself. Generally the interior of the marina basin very rarely requires dredging, which is not surprising considering the marina configuration. Marinas that are located within basins that include rivers or other sources of silt such as Elk Rapids typically have more significant dredging issues than locations like East Bay Harbor, where the only source of siltation is current and littoral drift.

Over the last twelve years, East Bay Harbor has dredged an average of 625 cubic yards per year. Maintenance dredging costs roughly $30 per cubic yard, or $18,750 per year. In a shared configuration with East Bay Harbor, the first Phase of the marina would be responsible for 25%-33% of the shared dredging costs, or roughly $4,700-$6,200 per year.

Additional Slip Mix Variables

The scenarios presented above are based on reasonably conservative slip mixes for each phase. The Market Analysis supports a potentially more optimistic slip mix than those used in this analysis, and recommends that Acme Township establish an "Interest" or Waiting List for a potential marina to determine the actual demand for the marina proposed.

The following scenarios represent a more optimistic slip mix and identify the higher end of the potential range of debt service generated for each phase if the Waiting List supports a mix of larger slips.

Phase One Optimistic Slip Mix:

**Revenues** (Stable, year three and beyond)

| | Regional Average |
|---|---|
| • Seasonal Revenue, 100% occupancy: | |
| Four (4) thirty-five foot (35') slips: | $ 14,840 |
| Six (6) forty foot (40') slips: | $ 28,080 |
| One (1) fifty foot (50') slip: | $ 6,750 |
| Seasonal Revenue Subtotal: | $ 49,670 |
| • Transient Revenue, 50% occupancy: | |
| Four (4) thirty-five foot (35') slips at $2,100 per year: | $ 8,400 |
| Seven (7) forty foot (40') slips at $2,450 per year: | $ 17,150 |
| One (1) fifty foot (50') slip at $3,450: | $ 3,450 |
| Transient Revenue Subtotal: | $ 29,000 |
| • Boat Launch Revenue: | |
| Seasonal Pass Revenue: | $ 6,000 |
| Day Launch Revenue: | $ 12,500 |
| Boat Launch Revenue Subtotal: | $ 18,500 |
| **Total Gross Revenue:** | **$ 97,170** |
| Operational costs at 50% gross revenue per year: | -$ 36,115 |
| **Net Revenue:** | **$ 61,055** |
| Debt service generated at 4% for 30 years: | $1,055,765 |
| Debt service generated at 3.25% for 30 years: | $1,158,941 |

Compared to the more conservative Phase One slip mix, this mix reduces local costs by nearly $200,000 - $430,000 to $1,127,059 - $1,230,235.

Phase Two Optimistic Slip Mix:

**Revenues** (Stable, year three and beyond)

| • Seasonal Revenue, 100% occupancy: | Regional Average |
|---|---|
| Twenty-nine (29) thirty-five foot (35') slips: | $107,590 |
| Twenty-two (22) forty foot (40') slips: | $102,960 |
| Eleven (11) forty-five foot (45') slips: | $ 62,865 |
| Six (6) fifty foot (50') slips: | $ 40,500 |
| Three (3) sixty foot (60') slips: | $ 26,820 |
| Seasonal Revenue Subtotal: | $340,735 |

| | |
|---|---|
| Operational costs at 25% gross revenue per year: | -$ 53,652 |
| Increased Phase One efficiency credit: | $ 18,058 |
| **Net Revenue:** | **$305,141** |

| | |
|---|---|
| Debt service generated at 4% for 30 years: | $5,276,508 |
| Debt service generated at 3.25% for 30 years: | $5,792,161 |

Compared to the more conservative Phase Two slip mix, this mix generates as much as $283,000 in additional revenue that could be applied to Phase One local construction costs.

Phase Three A Optimistic Slip Mix:

**Revenues** (Stable, year three and beyond)

| • Seasonal Revenue, 100% occupancy: | Regional Average |
|---|---|
| Thirteen (13) thirty-five foot (35') slips: | $ 48,230 |
| Twenty-six (26) forty foot (40') slips: | $121,680 |
| Four (4) forty-five foot (45') slips: | $ 22,860 |
| Three (3) fifty foot (50') slips: | $ 20,250 |
| Three (3) sixty foot (60') slips: | $ 26,820 |
| Three (3) seventy foot (70') slips: | $ 34,650 |
| Seasonal Revenue Subtotal: | $274,490 |

| | |
|---|---|
| Operational costs at 25% gross revenue per year: | -$ 41,654 |
| **Net Revenue:** | **$ 232,836** |

| | |
|---|---|
| Debt service generated at 4% for 30 years: | $4,026,208 |
| Debt service generated at 3.25% for 30 years: | $4,419,674 |

Compared to the more conservative Phase Three A slip mix, this mix reduces local costs by more than $333,000 to $2,920,326 – 3,313,792.

Phase Three B Optimistic Slip Mix:

**Revenues** (Stable, year three and beyond)

| | Regional Average |
|---|---|
| • Seasonal Revenue, 100% occupancy: | |
| Two (2) forty foot (40') slips: | $ 9,360 |
| Thirty-six (36) forty-five foot (45') slips: | $205,740 |
| Sixteen (16) fifty foot (50') slips: | $108,000 |
| Twelve (12) fifty-five foot (55') slips: | $ 93,720 |
| Thirteen (13) sixty foot (60') slips: | $116,220 |
| Three (3) seventy foot (70') slips: | $ 34,650 |
| Seasonal Revenue Subtotal: | $567,690 |
| Operational costs at 25% gross revenue per year: | -$ 85,766 |
| **Net Revenue:** | **$ 481,924** |
| Debt service generated at 4% for 30 years: | $8,333,446 |
| Debt service generated at 3.25% for 30 years: | $9,147,842 |

Compared to the more conservative Phase Three B slip mix, this mix reduces local costs by more than $337,000 to $6,912,158- $7,726,554.

## Alternative Park Only Scenario

As an alternative to the marina scenarios presented above, a "park only" alternative was prepared and assessed. The following concept is based on a program that eliminates the existing marina facilities and structures on site, restores the shoreline, and creates a basic public waterfront park. Construction costs utilized the same factors, assumptions, and unit prices as the marina alternatives. Land acquisition costs are excluded, and maintenance and operations are included. No programming or staffing is included beyond basic maintenance. Increased insurance costs to the Township are not included.

### Construction Costs

The estimated construction cost for the Park Only concept is $2,347,200. Major project components include:

| | |
|---|---|
| Demolition: | $ 350,000 |
| EBHC Basin Fill: | $ 320,000 |
| Fishing Pier: | $ 280,000 |
| Restroom Structure: | $ 100,000 |
| Landside Infrastructure: | $ 186,000 |
| Landscape Restoration: | $ 720,000 |
| Subtotal: | $1,956,000 |
| 20% Contingency: | $ 391,200 |
| **Total:** | **$2,347,200** |

### Maintenance Costs

Maintenance and Operations costs are estimated as follows:
Maintenance Labor: 8 hours per week, 14 weeks, at $30/hour labor cost = $3,360
Infrastructure Replacement (sinking fund): $5,000 per year
Yearly Cleanup / Repairs: $10,000 per year
**Total: $18,360**

### Additional Impacts

East Bay Harbor pays approximately $13,530 in total taxes per year, of which roughly 10% goes to Acme Township.

Use of the Boating Economic Impact Model developed by Drs. Mahoney, Stynes, and Cui of Michigan State University indicates that East Bay Harbor Marina generates estimated direct economic effects on the local economy of approximately $761,000. This spending creates 6 jobs at businesses selling goods and services directly to the boaters, including three jobs in marina services, one job in restaurants and bars, and one job in retail stores. Including secondary effects, the total impact on the local economy is eight jobs.

In summary, construction of the park concept will cost approximately $2,347,000, and require yearly ongoing maintenance costs of approximately $18,000. Loss of East Bay Harbor marina will reduce local tax income by approximately $1,300 per year, and eliminate the direct economic impacts of $761,000 per year and eight jobs.

## Alternative Park / Launch Scenario

As an alternative to the marina scenarios presented above, a "park / launch" alternative was prepared and assessed. The following concept is based on a program that eliminates the existing marina facilities and structures on site, creates a four-lane boat launch, restores the shoreline, and creates a basic public waterfront park with parking for 25 vehicles with trailers. Construction costs utilized the same factors, assumptions, and unit prices as the marina alternatives. Land acquisition costs are excluded, and maintenance and operations are included. No programming or staffing is included beyond basic maintenance. Increased insurance costs to the Township are not included. Operations costs assume a fully automated system with no regularly scheduled staffing.

### Construction Costs

The estimated construction cost for the Park Only concept is $4,775,000. Major project components include:

| | |
|---|---|
| Marine Infrastructure (breakwater, dredging, and walls): | $2,195,000 |
| Boat Launch: | $ 300,000 |
| Landside Infrastructure/Demolition (parking, landscape, and site furnishings): | $1,064,000 |
| Fill of Existing Marina Basin: | $ 320,000 |
| Restroom: | $ 100,000 |
| Subtotal: | $3,979,000 |
| 20% Contingency: | $ 796,000 |
| **Total:** | **$4,775,000** |

### Maintenance Costs

Maintenance and Operations costs are estimated as follows:
Maintenance Labor: 8 hours per week, 14 weeks, at $30/hour labor cost = $3,360
Infrastructure Replacement (sinking fund): $5,000 per year
Yearly Cleanup / Repairs: $10,000 per year
Dredging: $18,750
**Total: $37,110**

### Additional Impacts

East Bay Harbor pays approximately $13,530 in total taxes per year, of which roughly 10% goes to Acme Township.

Use of the Boating Economic Impact Model developed by Drs. Mahoney, Stynes, and Cui of Michigan State University indicates that East Bay Harbor Marina generates estimated direct economic effects on the local economy of approximately $761,000. This spending creates 6 jobs at businesses selling goods and services directly to the boaters, including three jobs in marina services, one job in restaurants and bars, and one job in retail stores. Including secondary effects, the total impact on the local economy is eight jobs.

Yearly operational costs of $37,000 are offset by projected boat launch revenues of $18,500 per year, resulting in a yearly operational loss of $18,500. This means that this alternative does not generate sufficient revenues to cover any debt service on revenue bond funding.

In summary, construction of the park / launch concept will cost approximately $4,775,000, and require yearly ongoing maintenance costs of approximately $37,000. It is likely that MDNR would support up to 50% of the total cost of this alternative, resulting in local costs of $2,387,500. Loss of East Bay Harbor marina will reduce local tax income by approximately $1,300 per year, and eliminate the direct economic impacts of $761,000 per year and eight jobs. As this alternative does not generate sufficient revenue to cover revenue producing infrastructure, it is financially infeasible.