





Ellis Harbor Business Plan and Feasibility Study

Prepared for:
City of Cedar Rapids
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October 31, 2011

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Ellis Harbor Site, circa 1940



EXECUTIVE SUMMARY

Ellis Harbor has been a treasured asset to the City of Cedar Rapids for decades, and boaters remain active and supportive of the harbor. Over the course of time, much of the existing infrastructure has become functionally obsolete and must be replaced to ensure a safe and effective harbor that is in compliance with federal accessibility standards. The primary goal of this plan is to identify an effective business model that will allow the activities at Ellis Harbor to continue in a financially sustainable way over the long term.

The current conditions in Ellis Harbor are a source of frustration to both the boaters and the City operators. With much of the shoreline and walkway infrastructure failing and no funds available to renovate immediately, repairs are made on an emergency basis at higher costs. Lease rates are very low compared to comparable harbors, resulting in insufficient staffing to provide a level of service acceptable to either the boaters or the City operators. This results in a cycle where boaters are unwilling to pay higher rates for service they feel is inadequate, and the City is unable to improve service to a level acceptable to everyone. In our review of the operations, we are impressed with the level of service the City has been able to provide on the limited funds available.

The harbor has not been operated as a separate enterprise unit, making tracking of costs associated with the harbor very difficult. While tracked expenses are not available, our assessment of the income versus operational expenses in Ellis Harbor, based on our experience with literally hundreds of harbors, is that the current facility is being operated at a loss when all expenses are included. While rates have been kept very low over the years, they have not provided sufficient financial capacity for reserve funds to be set aside over time to address the current failing infrastructure.

While the basic layout of Ellis Harbor in two separate basins creates a harbor with very convenient parking and access, this layout is also the reason for the majority of costs of any potential renovation due to approximately 6,300 linear feet of shoreline armoring. This element is by far the most costly part of the renovation, and this configuration is highly inefficient relative to the number of slips accommodated. During the course of this study, eight alternative approaches were considered including repair and reinforcement of the existing walls, reconstructing the harbor essentially in place utilizing different construction techniques, relocating the harbor to a new site, selling the facility, and closing it altogether.

Our recommendation is to relocate Ellis Harbor to a new facility immediately across the river in the area known as “the cove” in phases based on demand over a five year period. This is the lowest cost approach to providing modern facilities in an efficient layout that creates the best opportunity for long term financial sustainability. Our analysis of the market indicates that Ellis Harbor is nearly unique in the market, and rates are significantly lower than surrounding facilities. Despite the lower rates, demand for boat slips is very weak at 50% due partly to the economy and partly to the limited boatable area on the river. Demand for boathouses, however, remains strong, with a waiting list of eighteen boaters. While lease rates remain a contentious topic, the fact that a number of stalls are leased but unused and unoccupied indicates that some feel rates are so low they can afford to keep the stall even though it isn't being used. This keeps potential active boaters out of the harbor and contributes to some parts of the harbor being neglected.



The cost of renovation or construction of a relocated facility ranges from \$5.8 million to over \$10 million. Depending on the level of outside funding, either city, state, or federal, lease rates will need to increase significantly. We recognize these are significant costs, but we also believe the current situation is untenable in the long term. The existing facility is not compliant with the 2010 ADA Standards for recreational boating, which take effect March 15, 2012. Should the City continue with the current approach and lease rates, we believe the current infrastructure will inevitably fail and lead to closure of the harbor. Repairs made on an emergency basis cost significantly more, and the worst case could include failure of a length of wall section impacting multiple boathouses. It is possible to renovate the existing facility, but at a higher cost in terms of dollars and inconvenience to the boaters. We understand that a number of significant repairs have been made over recent years, and these improvements have been factored into the financial analyses presented in this report.

In summary, we believe that boating on the Cedar River is viable in the long term and that Ellis Harbor has the potential to be a high quality modern facility that is durable, easy to maintain, and of a quality that is worth the lease rates required to sustain it in the long term. Working directly with the boaters, we have proposed facilities that are modern and durable, but not extravagant. The focus is on function and ease of maintenance, with a rate structure and business model that anticipates the lifespan of infrastructure that greatly reduces the likelihood that future generations will be faced with costs that exceed available reserve funding. This can be accomplished on rates that, although higher than current rates, are reasonable in comparison to the local market and significantly less than similar facilities nationwide.





ELLIS HARBOR SITE ASSESSMENT

Existing Condition of Sheet Pile Wall: The existing sheet pile wall is at or nearing the end of its functional life. Two segments of the existing east basin wall, totaling 217 linear feet, failed during recent flooding and have since been replaced. However, the vast majority of sheet pile is subject to loading that the sheet pile was not originally designed to accommodate. In particular, the anchoring system for most of the boathouses rely on adjustable bars that link the floating structures directly to the sheet pile walls. The sheet pile walls and short tieback system were not constructed to take the loads of houseboat anchoring and over time the walls have begun to deform and separate from the sidewalk.

An independent inspection report was completed by professional engineers in April of 2011 recommending replacement of the sheet pile at W-Dock, E-Dock, and EE-Dock as soon as practicable. According to the report, EEE-Dock may not need replacement at this time. Our assessment of EEE is that it will need to be replaced before the lifespan of proposed improvements to W, E, and EE, and these costs should be accounted for. Sheet pile deficiencies noted in the report include insufficient pile depth and insufficient pile thickness, which are consistent with



deficiencies noted in a separate 2007 geotechnical report. Other report recommendations include providing mooring points that are not connected to the sheet pile, replacement of sidewalks and sidewalk base material, and installation of a drain tile at the back of the sidewalks. The report provided an order of magnitude cost of six to seven million dollars for critical infrastructure.

Existing Condition of Sidewalks: Existing sidewalks adjacent to the sheet pile wall are failing, settling, separating from the wall, buckling, and undercutting. Existing sidewalks contain many tripping hazards and, more importantly, generate a significant safety risk should a complete failure occur. They are not compliant with the Americans with Disabilities Act standards.

Accessibility and ADA Compliance: The Americans with Disabilities Act standards require compliance with a number of standards covering walkways, ramps, parking, and recreational boating facility infrastructure. All public harbors and marinas must be in compliance with the most recent standards (2010) by March 15, 2012. Currently, the walkways are cracked, uneven, buckled, and sloped. This creates a dangerous and non-compliant situation that must be corrected. To achieve compliance with ADA Standards, accessible routes/ramps must be added, sidewalk cross slopes must be leveled, and accessible parking spots must be designated.





Existing Boat Docks: EEE-Dock contains fifty-two docks that are mounted to the seawall on one end and floating on the outboard end. Each dock is eighteen feet long. The docks were installed after the flood of 2008 and are in good condition. These could be re-used in potential restoration/reconfiguration of the harbor.

Harbor Depths: Although recent bathymetric survey data is not available, many harbor tenants have indicated that depths within both basins and entrances are either currently insufficient or will be insufficient soon, based on recent trends. Measurements taken by harbor tenants indicate east harbor depths range from four to fourteen feet and west harbor depths range from four to eight feet, at current water levels.

Water Quality: Water quality is poor within both basins due to inadequate circulation. Harbor entrances do not provide adequate circulation due to their downstream orientation, and culverts to Manhattan-Robbins Lake at the north ends of both basins do not discharge fresh water into the basins. Flushing of the basins likely occurs when high water conditions bring Cedar River flow over the harbor peninsulas approximately once per year.

Existing Utilities: Ellis Harbor is served with sanitary sewer by two sanitary lines along Ellis Boulevard. Sanitary service provided includes a bathroom facility located adjacent to W-Dock and two sanitary disposal sites located within the park area between Ellis Boulevard and W-Dock. No sanitary service is provided to the slips and tenants must transport waste to the sanitary disposal sites.

The harbor is served with water by a main running parallel to Ellis Boulevard. Potable water service is provided to the bathroom facility, but not to any of the slips. Tenants must supply boats/boathouses with potable water. Non-potable water is available at the two sanitary disposal sites adjacent to W-Dock and at several locations adjacent to E-Dock.

Electric service is provided to the boathouses by overhead lines at W-Dock, E-Dock, and EE-Dock. The overhead lines connect to recently-constructed electric panels that are fed by overhead supply lines. EE-Dock incorporates some underground service lines in addition to the overhead distribution lines.





COMPARABLE HARBOR ANALYSIS

SUMMARY

Due to the rarity of boathouse harbors in the Midwest, this study considered facilities across the nation and Canada to obtain comparable information for facilities with similar attributes. Therefore, this research was broken down into three different categories: area marinas, regional marinas, and site-specific marinas.

Area harbors include the Ellis Harbor site and others within a 50 mile radius. The three harbors that fit within this radius include Scales Pointe Marina, Mid River Marine and Coralville Lake Marina. All three are contained in Coralville Lake and are within 21 miles of Ellis Harbor. Regional harbors consisted of 36 facilities within 250 miles of the site. Site-specific harbors from around the country included facilities that contain boathouses in Northfield, New Jersey; Norris Lake, Tennessee; Portland, Oregon; and Vancouver, British Columbia.

A. When researching area and regional harbors, attention was focused on slip rate, occupancy, waiting list, price of on-site winter storage, cost of boat launch use, and jet ski mooring. A summary of the findings for the area and regional marinas is listed below:

20-24' Slip

- The average yearly rate for a slip size of 20-24' in area marinas is \$975. For regional marinas, this rate jumps to \$1350. For Ellis Harbor, the current seasonal rate for a 12x30 slip is \$247 for a resident and \$330 for a non-resident.

Boathouse Stall

- The current yearly rate for Ellis Harbor boathouse stalls is \$453 for a resident and \$610 for a non-resident. Although there are a lack of comparable facilities within area and regional harbors with boathouse slips, these rates are still far less than comparable facilities for slip sizes of 20-24'.

40' Slip

- The average rate for a 40' slip in area marinas is \$2,228/year, and for regional marinas the rate is \$2330/year. The seasonal rate for comparable 33'x42' houseboat stall is \$453 for a resident and \$610 for a non-resident at Ellis Harbor.

50' Slip

- The yearly average rate for a slip size of 50' in area marinas is \$2578. For regional marinas the rate is \$2816. Ellis Harbor does not contain any 50' slips, although the slip area of a 33'x42' Ellis Harbor houseboat stall (1,386 SF) is larger than the slip area of a typical 50' slip (1,000 SF). As mentioned above, the seasonal rate for a houseboat stall at Ellis Harbor is \$453 for a resident and \$610 for a non-resident.



Seasonal Occupancy

- The average seasonal occupancy for marinas within the area is full, while that of regional marinas is 90%. The occupancy of Ellis Harbor boathouse stalls is full, with 80% being residents and 20% being non-residents. The occupancy of the slips is 50%, with 72% of the occupied slips being residents and 28% being non-residents.

Waiting List

- 1 of 2 respondents has a waiting list for area marinas, and 9 of 18 respondents have a waiting list for regional marinas. Ellis Harbor has a waiting list of eighteen for boathouse stalls.

On-Site Outdoor Winter Storage of 800SF

- The average seasonal cost of on-site winter storage is \$425 for area marinas and \$403 for regional marinas. Ellis Harbor currently charges \$265 for residents and \$345 for non-residents for a 20'x40' storage area.

Boat Launch

- Area marinas charge an average of \$5/day to allow access to their boat launch. Regional marinas charge an average of \$9/day. Both area and regional marinas charge an average of \$125 for a season pass. Ellis Harbor currently has no charge for use of the boat launches and boat launch parking.

Jet Ski

- The average seasonal cost in area marinas to moor a jet ski is \$534. The seasonal cost for regional marinas is similar with a cost of \$533. Ellis Harbor does not currently charge additional fees to tenants for jet ski moorage.



- B. For site-specific marinas, nine floating homes were studied at seven different locations. Factors addressed were price of floating home, associated taxes (if any), monthly fees, and unit size (if given). The summary of the site specific marinas are listed below:

Price of Floating Home

- The average price of the nine floating homes was \$300,732, which includes varying amenities, slip ownership rights, and services. For Ellis Harbor, the price of floating homes range from approximately \$10,000 to \$150,000, which does not include slip ownership rights or any services.

Taxes

- Of the nine floating homes studied, five have property taxes that are separate from the monthly fees (there is one additional home with property taxes included in monthly fees). The average annual property tax associated with the floating homes is \$6,080. Tenants in Ellis Harbor do not own slips, therefore no property taxes are assessed.

Fees

- Average monthly fees associated with the floating homes studied is \$589/month, which are typically homeowner association fees. Ellis Harbor charges \$453/year, or \$37.75/month, for residents. For non-residents the rate is \$610/year, or \$50.83/month.

Unit size

- When looking at unit size, the maximum size of a floating home that can be moored was analyzed. The average unit size of floating homes studied was 25'x40'. Ellis Harbor's boathouse stalls are 24'x42', with a maximum allowable boathouse size of 18'x30'.





STRENGTHS, WEAKNESSES, OPPORTUNITIES, and THREATS ANALYSIS

Both the long term and day to day operation of Ellis Harbor are impacted by the physical characteristics of the site, layout of the harbor, operational expenses, and outside factors such as competition from other harbors. These elements can be assessed through a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis, which is helpful in identifying the key issues informing the decision process.

Ellis Harbor Strengths

Strong Demand for Boathouses: All existing boathouse slips are leased, with a waiting list of eighteen potential harbor tenants.

Proximity to Downtown Cedar Rapids: Ellis Harbor is located within the City of Cedar Rapids, only two miles from the heart of downtown. This location makes Ellis Harbor the closest and most convenient location for boating in the region. Coralville Lake marinas are as far as eighteen miles away.

Park Setting: Ellis Harbor is located adjacent to Ellis Park and other riverside park areas that create a beautiful park setting for the harbor tenants.

Monopoly: Ellis Harbor provides the only publicly available slips for runabouts, pontoon boats, house boats, and boathouses on the Cedar River. This lack of competition should allow Ellis Harbor rates to match the actual market value without downward pressure from competing private facilities.

Ellis Harbor Weaknesses

Physical Layout: The physical layout of Ellis Harbor into two distinct basins creates approximately 6,300 linear feet of shoreline requiring armoring of some type. Shoreline armoring is one of the most expensive elements of harbor infrastructure, and this length of armoring for only 274 slips is highly inefficient and can be prohibitively expensive.

Highly Flood Prone Area: The Cedar River has a long history of significant flood events, typically in spring and early summer. While the floating docks can accommodate significant changes in water level, these flood events put greater strain on the anchoring system for the boathouses, which over time has weakened the sheet pile walls. The eastern basin (EE and EEE) of Ellis Harbor is also affected by ice flows, which requires all floating infrastructure to be removed each year.

Limited Boatable Area: The Cedar River is a relatively shallow water body, which limits the extent of navigable waters to between two and six miles depending on both the draft of the boat and seasonal water level fluctuations.

Lack of Modern Infrastructure: Modern harbors typically provide a comprehensive set of facilities and utilities for boater convenience and protection of natural resources. These typically include marine electrical service and potable water at each slip, sanitary lines or pump-out facilities, fuel, Wi-Fi internet



access, and a boater services building with showers, restrooms, a small store, and boater lounge. In some harbors, cable television and phone services are provided, although these services are now often replaced by satellite and cellular technologies provided by the boaters themselves.

Budget Limitations: Ellis Harbor is operated by the Parks Department of the City of Cedar Rapids. Following the flood of 2008, City resources have been stretched to capacity. Additionally, slip lease rates are very low, generating insufficient revenue to cover operating expenses and fund long term capital improvements and infrastructure replacement. One key indicator that slip prices for boathouses are too low is the existence of a number slips that are leased but vacant and unused, even though others remain on a waiting list.

Lack of Boater Destinations: While the Cedar River provides opportunities for fishing, boating, skiing, and other activities, there are very few specific destinations for boaters to visit. These include a public dock near downtown serving a number of local restaurants, and a few beach destinations upstream.

Permitting Issues Limit Expansion Area: While demand exists for additional boathouse slips, expansion opportunities at Ellis Harbor are limited by likely permitting restrictions. Expanding to the northwest into Robbins Lake would require significant dredging and would impact the floodway of the Cedar River.

Ellis Harbor Opportunities

Strong Demand for Boathouse Slips: All boathouse slips are leased, and a waiting list of eighteen names is maintained by the Park District.

Potential for Alternate Locations: The area known as “the cove”, located directly across the river from Ellis Harbor, presents the opportunity to create a new harbor with a much more efficient layout. Compared to the current layout at Ellis Harbor, the cove site would allow significantly more slips with much less shoreline infrastructure required.

Potential for Additional Non-Boater Park Amenities: There is space within Ellis Harbor to create a number of additional park amenities, such as playgrounds, fishing docks, or waterside pavilions.

Potential Expansion of Boathouse Slips into East Basin or Robbins Lake: While potentially difficult from a permitting perspective, expansion into Robbins Lake remains a possibility. A potentially less challenging alternative is to expand boathouse slips into the east basin of Ellis Harbor. Consideration of early summer flooding would be required, and winter storage of boathouses on land or in the fairway of the west basin would likely be necessary.

Ellis Harbor Threats

Low Demand for Boat Slips: Prior to the flood of 2008, nearly all of the boat slips were occupied. Currently, occupancy of boat slips is hovering around 50% or less. This is most likely due to the current poor economy and lingering aftereffects of the flood. The boat slips in Ellis Harbor generally serve boats less than 25' in length, which are easily trailerable and stored at home. Despite the very low boat slip prices, boaters are not choosing to keep their boats in Ellis Harbor. As the economy improves, it is likely



that higher occupancy numbers will eventually return. However, the need to increase slip prices to cover critical infrastructure improvements will likely decrease demand to a lower number in the future.

Limited Demand for Houseboat Slips: Demand for Houseboat slips in the east basin has remained stable, but at a very low number of slips. Capacity for many more houseboats exists, but demand for additional slips is very low.

Flooding/Ice: The annual cycle of flooding and ice flow puts significant strain on the Ellis Harbor infrastructure. All floating infrastructure in the east basin must be removed each winter.

Dredging: The configuration of Ellis Harbor requires regular maintenance dredging at the southeast end of the west basin.

Existing Condition of Sheet Pile Wall: The existing sheet pile wall is at or nearing the end of its functional life. Two lengths of the existing wall in the east basin failed during recent flooding and have been replaced, but the vast majority of sheet pile is under stress not addressed in the initial construction. In particular, the anchoring system for most of the boathouses relies on adjustable bars that link the floating structures to the sheet pile walls. The sheet pile walls were not constructed with sufficient walers and tie back systems to take the loads of houseboat anchoring and over time the walls have begun to deteriorate and separate. While EEE is in better condition than the others, a separate recent engineering analysis of the walls indicated replacement is recommended.

ADA Compliance: The Americans with Disabilities Act requires compliance with a number of standards covering walkways, ramps, parking, and recreational boating facility infrastructure. All public harbors and marinas must be in compliance with the most recent standards (2010) by March 15, 2012. Currently, the walkways adjacent to the sheet pile wall are failing, settling, and separating from the sheet pile wall. This creates a dangerous and non-compliant situation that must be corrected.

Lack of Adequate Lease Rates and Capital Reserves: The most imminent threat to the future of Ellis Harbor is the cost of replacing functionally obsolete infrastructure. Over the years, the lease rates for Ellis Harbor have been very low, providing just enough funding to cover basic maintenance. Prudent management of harbor operations requires identifying funding sources sufficient to replace major infrastructure. In a private operation, these funds are obtained through adequate lease rates. If the market will not support adequate rates, the operation is financially infeasible and would not be able to secure outside financing for initial construction. In municipal operations, these funds are also obtained through adequate lease rates, with initial construction expenses often supported by grant funding for major infrastructure. We are not aware of any municipal harbor operations where long term operational and/or construction expenses are subsidized by the municipality.





CONCEPT PLAN ALTERNATIVES

Eight potential courses of action, including four concept plan alternatives, were considered as part of this study. These include:

- A) Do Nothing – Continue with Current Operation Approach
- A1) Repair / Reinforce Ellis Harbor Sheet Pile Walls
- B) Renovate Ellis Harbor in Current Configuration using Rip-Rap Edge
- C) Renovate Ellis Harbor in Current Configuration using Sheet Pile Edge
- D) Renovate Ellis Harbor in Single Basin Configuration
- E) Relocate Ellis Harbor to “The Cove”
- F) Sell/Lease Ellis Harbor Assets to Private Operator
- G) Close Ellis Harbor

These alternative courses of action were reviewed with the public over the course of several meetings, and are summarized below.

A) Do Nothing – Continue with Current Operation Approach

The current operational approach at Ellis Harbor is a municipally owned and operated facility with a rate structure predicated on providing boating facilities on a cost-recovery basis. In actuality, the rates can be considered subsidized since infrastructure reserve funding is not included. While this approach has provided boating access at rates approximately one-third to one-fifth the regional average, it has resulted in a financially unsustainable business model and significant frustration among both boaters and operators.

From a financial perspective, the current rate structure achieves yearly revenues of approximately \$96,000 based on approximately 220 leased slips out of 274. As outlined in the maintenance and operations section of this report, an effective maintenance and operations budget for Ellis Harbor should range between \$130,000 and \$150,000 per year. Our assessment of the hours invested in maintaining the area immediately adjacent to Ellis Harbor show that the City incurs yearly costs between \$95,000 and \$105,000. This level of funding is insufficient to provide a level of service that is acceptable to either the City or boaters.

Critically, the current income leaves little or no reserve funds available for replacement of infrastructure, which is at or nearing its functional life in the case of the walkways and sheet pile walls. Repairs to functionally obsolete infrastructure are more costly under the current approach because they are made on an emergency basis when a failure occurs rather than in a predictable and controlled approach as outlined in Alternative B.

While it would be possible to continue operating Ellis Harbor in this manner, it is impossible to predict what the ongoing costs would be on a yearly basis. For example, if a portion of sheet pile wall on E were to fail in a high water event, it is possible that a boathouse could break loose and increase the pressure on an adjacent structure. This could create a cascading failure where several structures break loose leading to extensive sheet pile wall failure and damage to other boathouses. As confirmed by a separate independent



analysis of the infrastructure, the majority of the sheet pile wall is obsolete, with the remaining portion (EEE) identified as needing replacement in the near future, making this a real possibility. With no reserve funds available and City resources already stretched to the limit due to flood recovery efforts, we feel continuing this approach will ultimately lead to closure of Ellis Harbor following an unpredictable event.

Finally, while this approach has effectively kept costs for boaters low, and some boaters indicated to us that continuing this approach was acceptable, we did not hear from any boaters who felt the current physical condition of the facilities and level of service were acceptable. However, should this approach be selected, we recommend the following minimum actions:

- 1) Immediately implement repairs to all sidewalks adjacent to the sheet pile walls to comply with ADA standards by March 15, 2012. Establish a budget for continuing and ongoing repairs to address subgrade failures if sheet pile wall is not repaired at the same time.
- 2) Establish Ellis Harbor as an “enterprise district” similar to the golfing facilities whereby all income and expenses related to the harbor are tracked separately from other Park Department and City expenses. This will allow direct tracking of costs to better understand the actual cost of operation, maintenance, and repair of the facility.
- 3) Establish a significant reserve fund to offset the cost of inevitable infrastructure failures.
- 4) Restructure current lease rates to cover the costs of items 1-3 above based on actual rather than estimated expenses.

Construction Cost Estimate

Without a defined scope of construction, it is impossible to define a construction cost estimate. However, this approach results in the least efficient use of construction dollars, and will likely result in the highest costs over the long run.

Concept A Pros and Cons

Pros:

- Lowest cost to boaters in short term

Cons:

- Highest overall costs to community in long term
- Unacceptable level of service and facilities for boaters
- “No win” situation for City staff with insufficient resources to provide acceptable level of service
- Unpredictable expenses
- Will almost certainly ultimately lead to closure of Ellis Harbor

In summary, we do not recommend this approach, as it is both financially unpredictable and unsustainable, and underlying boater satisfaction issues will not be resolved. Ultimately, this will result in the highest costs to the community.



A1) Repair/Reinforce Existing Sheet Pile Walls

The current Ellis Harbor steel sheet pile shoreline armoring infrastructure is approximately 40 – 50 years old and has deformed in many areas due to age and decades of stress from boathouse loading, ice, and flooding. Two separate, independent analyses by professional engineers assessed the condition of the existing sheet pile in 2007 and 2011. Both came to the same conclusion that the sheet pile is in poor condition and should be replaced. While a detailed technical analysis of the sheet pile is outside the scope of this report, our visual assessment of the existing infrastructure based on over thirty years of experience in design, engineering, and construction of marine infrastructure is consistent with the prior assessments.

While design and/or as-built drawings for the facilities are not available, several boaters have indicated that the sheet pile is at most fourteen feet long, and less in areas where rock was encountered. Further, based on comments from the boaters, the system was not constructed with walers or tie-backs sufficient to accommodate the loads created by the boathouse anchoring systems.

Concept A1 was proposed by a group of interested boaters and includes repair and reinforcement of the existing walls, installation of sufficient anchoring for the boathouses, replacement of non-compliant walks, and ice suppression to minimize ice damage to the facilities. It is important to note that the long term viability of the proposed repairs and reinforcement to the existing infrastructure will depend in large part on the structural integrity of the existing steel sheet pile. The integrity and length of the steel is unknown, and significant engineering would be required to determine if repairs and reinforcement are possible. While we believe reinforcement can extend the useful life of the existing infrastructure, we also believe this is a shorter term solution on the order of twenty years. When compared to the lifespan of the options that follow, which range from sixty to eighty years, the life cycle cost analysis negates the perceived lower cost of this alternative.

Additionally, financing costs would increase if revenue bond funding is utilized since the bonding period cannot exceed the length of the anticipated useful life of the infrastructure being funded. While all other options considered utilize a 30 year bonding period, this option will likely support a maximum 20 year period unless detailed engineering analyses and testing indicate a longer lifespan is likely. The financial analysis of this option in the following section includes both 20 and 30 year bonding periods for clarity.

Construction Cost Estimate

Concept A1 is estimated to cost approximately \$4.75 million.

Concept A Pros and Cons

Pros:

- Lower cost to boaters in short term
- Maximizes re-use of existing facilities



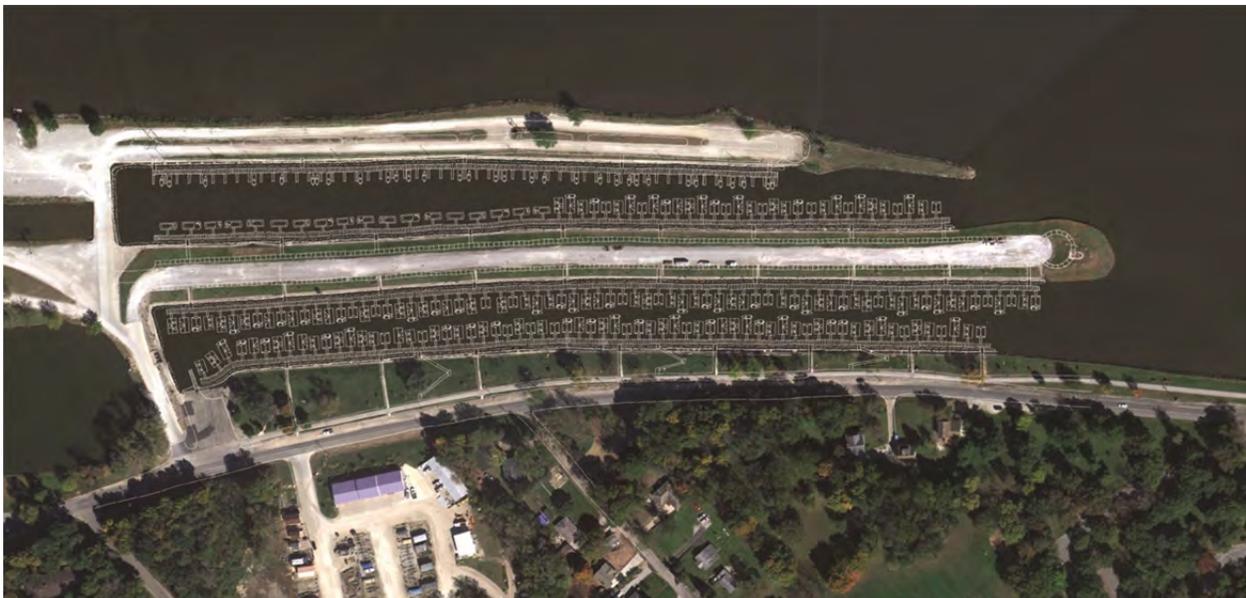
Cons:

- Relies on the structural integrity of 40-50 year old sheet pile
- Requires significant engineering analyses to confirm viability of existing installation
- Against recommendations of two prior independent engineering analyses
- Shorter term solution than reconstruction, higher life cycle costs overall
- Will likely only support a 20 year bonding period, increasing financing costs
- Does not address fundamental physical/economic issues

In summary, this approach seeks to repair and reinforce infrastructure that is nearing the end of its functional life. We believe this is possible, but will only improve conditions in the short term. Ultimately, this will result in higher costs to the community, so we do not recommend this alternative.

B) Renovate Ellis Harbor in Current Configuration Using Rip-Rap Edge

Concept B is predicated on renovating Ellis Harbor in its current configuration at the lowest reasonable cost, and restructuring the operational approach to establish a financially sustainable long term business model.



The critical infrastructure needs in Ellis Harbor include replacement of the existing sheet pile shoreline protection system, upgrading the anchorage system for boathouses, dredging of the harbor entrance, and replacement of the existing failed concrete walks with ADA compliant walkways. There are two potential approaches to replacing the existing sheet pile shoreline projection system. The first is to use sheet pile similar to the existing solution, and the second utilizes a rip-rap edge in place of the sheet pile.

Concept B utilizes a stone rip-rap edge in place of the existing sheet pile, and a floating marginal walkway in place of poured concrete walks. Boathouse anchorage is achieved by anchor piles that eliminate stresses on the shoreline infrastructure and floating docks. This system is widely used on flood prone rivers across the Midwest, and the piles are tall enough to allow the boathouse structures to rise and fall freely with the



changes in water level. This approach allows utilities to be located within the floating docks, which greatly improves the functionality of the harbor and reduces the effort required to prepare the harbor for flood events compared to the current system.

This concept includes upgrades to the basic utility infrastructure to provide improved electrical, potable water, and sanitary facilities. While not critical to the basic function of the harbor, the incremental cost of these improvements is warranted for several reasons.

First, the floating marginal walkways are accessed by three gangways each. While these gangways are located to make the harbor as convenient and accessible as reasonably possible, this approach will not be as convenient as the current system where boaters can park immediately in front of their boathouses. Second, this approach is easier to maintain, much more convenient for the boaters, and minimizes the risk of accidental gray and black water contamination of the river. Finally, this approach eliminates overhead power lines and significantly reduces visual clutter to improve the overall appearance of the harbor. This type of potable water and electrical infrastructure is considered basic and essential in most parts of the country, and the sanitary facilities are usually provided for non-motorized floating homes. Since the electrical infrastructure has recently been reconstructed, the cost estimate accounts for modifying, not replacing, the recent upgrades.



In addition, Concept B proposes to reduce the existing boat launch on W to reduce conflicts between boat launch users and boathouses, and reconstruct the boat launch near EEE to provide protection for the river current and make launching and hauling easier. Basic landscape improvements are included, as well as upgrading the remaining roadway and parking pavement that was not resurfaced in the fall of 2011.



Construction Cost Estimate

Concept B is estimated to cost approximately \$8.7 million.

Concept B Pros and Cons

Pros:

- Keeps Ellis Harbor in current location
- Significant cost savings over sheet pile
- Improved wave climate within the basins, as the stone rip-rap absorbs wave energy instead of reflecting it as sheet pile does.
- Improved flood protection performance, with less effort required of staff and boaters



- Reduced conflict between boat launch users and boathouses
- Improved aesthetics and longevity of infrastructure

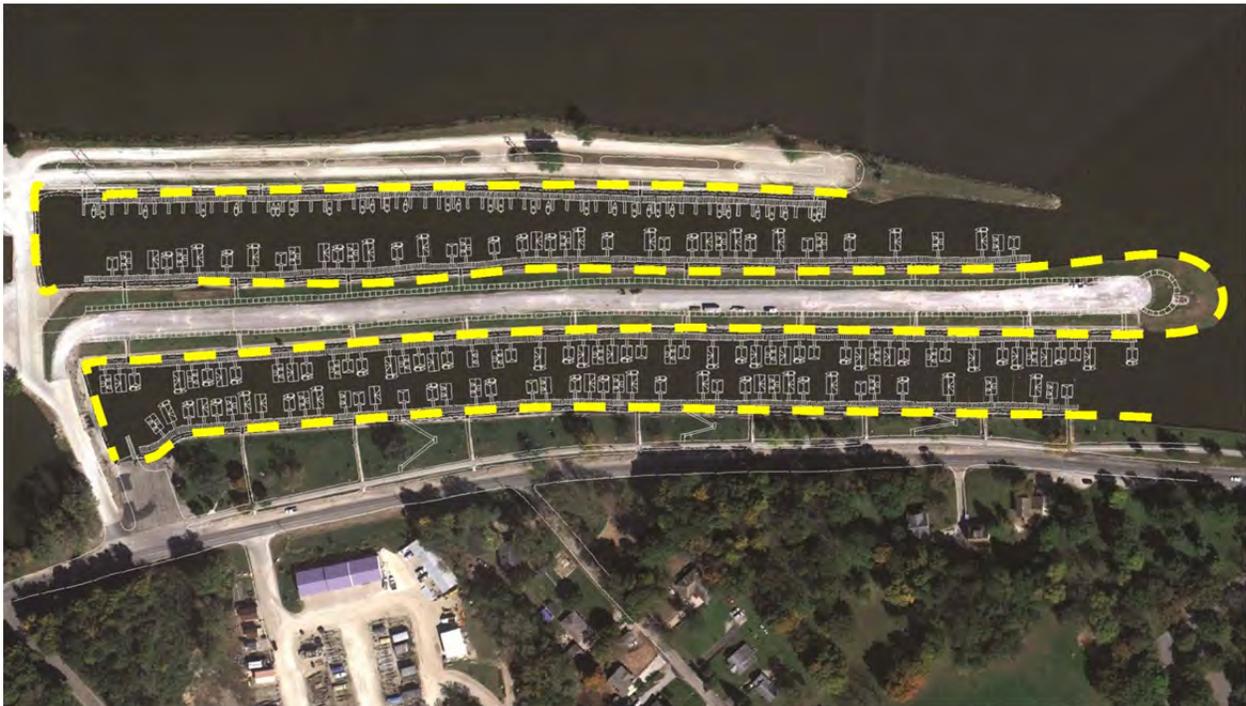
Cons:

- Reduction in fairway width due to angle of repose for stone rip-rap, resulting in either narrower space for front areas of boathouse or boat mooring area in back.
- Does not address fundamental physical/economic issues associated with excessive length of shoreline for small number of slips.
- Less convenient access (fewer access points) to marginal walkway.

In summary, Concept B is the lowest cost approach to improving Ellis Harbor in its current configuration, but not the lowest cost alternative overall. Of the alternatives that keep Ellis Harbor in its current location, we recommend consideration of this alternative only.

C) Renovate Ellis Harbor in Current Configuration Using Sheet Pile Edge

Concept C is very similar to Concept B, but predicated on renovating Ellis Harbor in its current configuration with similar construction materials and methods as the existing Harbor. The critical infrastructure needs in Ellis Harbor are addressed using a reinforced sheet pile system that incorporates walers and tiebacks to provide the strength necessary to adequately support boathouse anchorage systems. Existing failed walkways are replaced with new ADA compliant concrete walks, the harbor entrance is dredged, the existing boat launch is renovated, and utilities are upgraded similar to Concept B. Basic landscape improvements are included, as well as upgrading the remaining roadway and parking pavement that was not resurfaced in the fall of 2011.





Construction Cost Estimate

Concept C is estimated to cost approximately \$10.1 million.

Concept C Pros and Cons

Pros:

- Keeps Ellis Harbor in current location
- Maintains current level of access and parking convenience
- Maintains current fairway widths
- Reduced conflict between boat launch users and boathouses
- Improved aesthetics, and longevity of infrastructure

Cons:

- Most expensive construction cost
- Does not address fundamental physical/economic issues associated with excessive length of shoreline for small number of slips

In summary, Concept C is the most expensive alternative and does the least to solve long term structural financial issues. We do not recommend this approach.

D) Renovate Ellis Harbor in Single Basin Configuration

Concept D explores an approach that attempts to address the fundamental physical/economic challenge facing Ellis Harbor by eliminating the central berm between E and EE and reducing the length of shoreline protection required by nearly half. This approach would increase the height of the berm along EEE using materials excavated from the central berm, which would improve the level of protection of the entire basin. Shoreline protection would utilize stone rip-rap, and the overall implementation approach and infrastructure/amenities provided would closely match Concept B.

The essential challenge with this concept is that it creates a significant impact on the floodway of the Cedar River. It is very likely that the United States Corps of Engineers and Iowa Department of Natural Resources would not allow this encroachment on the floodway, and at the very least, the permitting process would be significantly longer and more expensive than any of the other alternatives considered.



Construction Cost Estimate

Concept D is estimated to cost approximately \$6.8 million.

Concept D Pros and Cons

Pros:

- Addresses fundamental physical/economic issues associated with excessive length of shoreline for small number of slips
- Lower cost than Concepts B and C
- Improved aesthetics and longevity of infrastructure

Cons:

- Potentially impossible to permit
- Major disruption to Harbor, potentially for an entire boating season
- Less convenient parking than current arrangement

In summary, while the lowest cost option for keeping Ellis Harbor in place, we do not recommend this approach due to the disruption in boating activities, complexity of permitting, and likelihood of rejection of the permit application process.



E) Relocate Ellis Harbor to The Cove

Concept E addresses the fundamental physical/economic issues associated with excessive length of shoreline protection at Ellis Harbor by proposing to relocate Ellis Harbor across the river to a site known as “The Cove”. The area is approximately 26 acres, with the south portion roughly 900’ x 1000’ and an approximate depth of 18’-20’. This configuration is ideal for construction of a highly efficient Harbor that can create a large number of slips/stalls with the least amount of landside and shoreline infrastructure required.



The cove was created approximately 40 years ago during the construction of a nearby highway infrastructure project. Due to the alignment of the riverbank, the cove area is generally protected from destructive ice flows during high water, as evidenced by the number and size of trees remaining on the land that separates the cove from the river. This alignment also minimizes sedimentation in the cove basin. The original depth of the cove area was reported to be approximately 30’ forty years ago. Sedimentation of only ten feet over forty years indicates an average rate of 3” per year, which is a very low rate of accumulation. While regular maintenance dredging of the entry will be needed, at this rate it will likely be another 50 years before the main body of the cove starts to see water depths of less than eight feet.



While detailed surveys have not been completed, it appears that the cove site can easily accommodate the existing 270 slips in Ellis Harbor, and can likely support future expansion of the harbor by 50% - 80% as demand warrants. The program for a relocated harbor in this location would include a stone rip-rap edge,



public promenade, utilities, new parking, and a boater services building. Parking may be more challenging to implement, but we believe it can be done.

Construction Cost Estimate

Concept E is estimated to cost approximately \$5.8 million.

Concept E Pros and Cons

Pros:

- Addresses fundamental physical/economic issues associated with excessive length of shoreline for small number of slips.
- Lowest cost approach to providing a modern harbor facility with a sustainable long term business model.
- Improved aesthetics and longevity of infrastructure
- Most easily phased project, with least disruption to existing boating operations
- Allows current Ellis Harbor site to revert to a natural state over time, likely improving the floodway, water quality, and reducing long term maintenance costs.

Cons:

- Relocates Ellis Harbor to opposite side of river
- Will require existing boathouses to upgrade floatation and conform with DNR guidelines
- Will involve loss of recent infrastructure upgrades at Ellis Harbor, potentially before the end of its useful life
- Less convenient parking than current arrangement

In summary, Concept E is the lowest cost alternative, has the least impact on ongoing boating activities, can easily be phased to match market conditions, and is the best harbor location in terms of existing physical conditions. Overall, we believe this approach will provide the best value for the boaters at the lowest cost, and we recommend this approach over all others.



F) Sell/Lease Ellis Harbor Assets to Private Operator

The assets of Ellis Harbor could theoretically be sold to some type of private operator, possibly a national harbor operator, an investor or investment group, or a consortium of local boaters. The first step in this process is to identify the value of the land and facilities, which is usually achieved by one of two appraisal methods: cash flow value or value of highest and best land use.

As harbor facilities are distinctly different from other types commercial properties, the most commonly used method for determining the actual value is through the use of a cash flow analysis. In this approach, the value of the facility is determined by the amount of cash generated after expenses and potential liabilities, which is the only usable asset available to service debt and/or provide profits to the owner. In the case of Ellis Harbor, at current rates the income roughly equals the operational expenses, creating an asset value of essentially zero. However, since the facilities that support this revenue generation are functionally obsolete, replacement costs are a liability and therefore the current facility actually has a negative value.

The second approach is based on an alternate land use (highest and best use), less the cost of removing any existing facilities that prevent this use. In the case of the Ellis Harbor site, the entire property is below the 100 year floodplain so there are almost no other potential uses for the site beyond recreational value. Should it be determined that the Harbor operation is no longer viable, the cost of removal of the facility would again result in a negative total value.

Therefore, it is highly unlikely that the City could sell the property for any more than a nominal amount. More likely would be a scenario where the City subsidizes improvement of the infrastructure as part of a deal to transfer the future operation of the facility to some type of private operator. This approach usually occurs in blighted waterfront areas where construction of a harbor facility will spur adjacent development and long term economic growth sufficient to justify the initial investment through growth of tax revenues. This is highly unlikely in the case of Ellis Harbor as there is little developable area nearby.

Another key consideration of a potential transfer of the property to any type of private operator is the long term financial health of the operation. Should a consortium of boaters seek to operate the facility, they would likely form a corporate entity (possibly a not-for-profit) to limit personal liability. This entity would need to assume all liabilities for the operation of the facility, including insuring potential losses to tenants from failing infrastructure, but also potential environmental impacts. If this entity were to fail, the City, State, or USACE would likely be called on to address potential environmental impacts.

In any case, the bottom line is that short of outside grant funding or other form of subsidy, the cost of any and all infrastructure improvements, maintenance, and operations can only be borne by the boaters using the facility. The private sector could likely provide operational staffing at lower labor costs, while the public sector may be able to secure funding at lower rates than the private sector.

Municipalities often utilize revenue bond funding to obtain funds for capital improvements. However, revenue bond funding is predicated on a predictable source of income over and above expenses, which under the current rate structure is essentially zero. The lack of comparable facilities and level of rate



increases necessary to support significant revenue bond funding makes market acceptance of these higher rates very difficult to predict.

Construction Cost Estimate

Concept F would likely require implementation of Concept B or E in order to secure a buyer.

Concept F Pros and Cons

Pros:

- Potential to transfer operational liabilities and expenses to other parties

Cons:

- Existing value of facilities is negative
- Likely to require significant initial subsidy to secure agreement with private operator
- Certain immediate rate increases
- Potential for liability to return to City in event of financial failure of third party

In summary, a beneficial sale of assets is highly unlikely, and private operators will likely have a more difficult time providing quality amenities at rates acceptable to boaters than the City. We do not recommend this approach.



G) Close Ellis Harbor

The final alternative considered for Ellis Harbor is to simply close the facility and convert the property to passive recreational use. As unfortunate as the loss of this treasured City resource would be, from a financial/business perspective, the current operation is a financial failure and closure should seriously be considered if significantly higher rates are unacceptable to the tenants.

While it is true that very few park amenities could be considered financially successful if assessed from a profit/loss business perspective, a standalone harbor facility that benefits 220 – 270 families out of a City population of roughly 125,000 is easily characterized as “Mostly Individual Benefit” utilizing the GreenPlay Pyramid Methodology of Cost Recovery and Subsidy Allocation. Under this categorization, widely used by park departments to fairly and equitably price services, the majority - if not all- of the costs of activities in this category should be borne by the individual users. With the exception of remote “harbor of refuge” facilities (very small harbors on the Great Lakes intended to provide safe harbor during storm events between larger ports), we are unaware of any significant municipal harbor - particularly operations over 200 slips - that operates on a long term subsidized basis beyond grant support of initial construction costs.

A sound business model for harbor operations requires income sufficient to cover operational expenses (staffing/labor costs, utilities, maintenance dredging, and regular maintenance), capital costs/debt service (the cost of debt associated with construction of revenue producing infrastructure), reserve funding (the cost of predictable replacement of revenue producing infrastructure, also known as a “sinking fund”), and in the case of private operation, profit. Where municipal marinas are located near private marinas and unfair competition could potentially be created by a municipal marina charging less than market rates, the municipal marina generally charges rates at or just above market rate and invests the “profit” in the waterfront resources to the benefit of all boaters, harbors, and waterfront users.

After outside grant or private funding, there are three possible rate structures available to municipalities: Subsidized, Cost Recovery, and Market Rate. Subsidized rates are based on what boaters are willing to pay regardless of cost of operation. The long term viability of this approach relies entirely on the financial capacity of the entity subsidizing the operation. Since Ellis Harbor is not collecting sufficient revenue to cover reserve funding for infrastructure replacement, it can be considered a subsidized rate. The Cost Recovery model covers all costs of operations, capital costs, and reserve funding, and attempts to manage rates to match these costs. The Market Rate model prices slips at whatever the market will bear regardless of the cost to provide the service. Private, for profit operations utilize a market rate model.

If the City of Cedar Rapids has insufficient financial capacity to fund major infrastructure investments in Ellis Harbor and/or sufficient outside/grant funding is unavailable, the only source of funds for construction and operation is the boaters. If the rates necessary to fund these operations and debt service are higher than boaters are willing to pay, then the only viable outcome is an orderly closure of the facility.



Construction Cost Estimate

Concept G is estimated to cost approximately \$300,000 - \$500,000 to remove failing infrastructure and begin park restoration.

Concept G Pros and Cons

Pros:

- Elimination of ongoing financial liabilities

Cons:

- Loss of Ellis Harbor

In summary, if rates necessary to sustain Concepts B or E in the long term are unacceptable to boaters, then unfortunately, closure of the harbor may be the only viable alternative.



OPERATIONAL ALTERNATIVES

OPERATIONAL ANALYSIS

The operational requirements of a harbor vary widely based primarily on the location, number of slips, and services provided at the harbor. Staffing requirements are directly associated with the amenities and services provided, with most of the positions being seasonal in nature and active from April 1 through November 1. Harbors are fundamentally part of the hospitality industry, and successful harbors are operated from this perspective. All boaters should be treated as guests, and customer service provided by helpful, knowledgeable, and friendly staff makes more of a difference to the success of a harbor than any other single element of the operation.

Any potential operation in Cedar Rapids should provide basic harbor services including seasonal and potentially “guest” slips (short term rental). It should not include ancillary harbor services such as engine or fiberglass repair, as these will be handled by private operators off site. Winter storage and haul-out operations should continue as in the past. The staffing required for a harbor of this size and complexity includes the harbor manager and two to five part time seasonal staff during the boating season (at full capacity up to 250 new slips).

Operational Models

There are several operational models for harbors that that City should consider. These include Municipal Operation, Contractor to Municipality, Third-Party Operator, and Licensee/Leasehold Operator.

Municipal Operation

The Municipal Operation approach is based on all elements of the harbor remaining under the direct operation and ownership of a municipal agency such as the City or some other municipal agency such as a Port Authority. The City is responsible for all costs associated with the operation, and is the beneficiary of any profits generated by the operation. Similarly, the City is responsible for all liabilities as well. All staff are usually employees of the City.

Among the challenges associated with this management approach is the need for the City to hire the staff necessary to operate the facility. In some cases, municipal agencies face significant internal resistance to hiring new staff for any reason, or labor agreements may make labor costs prohibitively expensive.

Among the advantages associated with this management approach is the ability to generate an operating surplus which can be used to fund expansion or improvement of the harbor or other nearby amenities. Additionally, the City retains a much higher level of control and flexibility in the operation of the harbor, and can more freely implement programs that may benefit the community or environment but conflict with the profit motive inherent in other operational alternatives with third party/for-profit operators.

In general, a properly sized and designed harbor under competent management will be revenue positive during normal market conditions. They are relatively simple to operate, and staff accredited as Certified Marina Managers are reasonably available. This approach generally has the lowest total cost and highest potential return for the municipality.



In many cases, full time harbor management staff take on other seasonal responsibilities within the municipality during winter such as ice rink operations. Part time seasonal staff are often college students on summer break or retired boaters looking for part time work.

Contractor to Municipality

The Contractor to Municipality approach is very similar to the Municipal Operation concept, except the employment status of the staff is an independent contract instead of being directly employed by the municipality. Depending on the indirect costs associated with hiring employees, this option may be more or less expensive than directly hiring staff internally.

In this option, the City generally retains a similar level of control as the Municipal Operation, along with the benefits and liabilities associated with ownership of the project. The contract between the independently contracted harbor manager spells out all costs, and generally specifies a “salary” and oftentimes includes incentive payments associated with specific financial performance targets.

Third-Party Operator

The Third-Party Operator approach involves contracting with a harbor management company that provides harbor management services to municipal or private owners. In this scenario, the harbor management company negotiates an operating contract with the harbor owner that establishes roles and responsibilities. There are no industry wide standard operating agreements, and the advantages and liabilities associated with this approach depend entirely on the final agreement.

One common approach involves the owner and third party operator negotiating a defined management fee over and above the operating costs for the harbor (regardless of whether the harbor is profitable in a given year) and incentives for achieving specific financial targets. In this scenario, the costs to the municipal owner could include the management fee (and incentives), labor costs at negotiated rates, utilities, and maintenance/capital improvements.

Depending on the contract language, this approach can be quite simple for the owner to manage and be very beneficial, or possibly skewed to the benefit of the operator at the expense of the owner. There are examples in the Midwest where third-party operators return a significant budget surplus to the municipal owner, and other cases where the third-party operator returns no money at all to the municipal owner. Another element to consider is whether the operator is expected to invest in and/or construct the harbor (revenue-producing components) or simply operate an existing harbor paid for by the owner.

The length of the operating agreement varies by contract, generally between five and twenty years. Generally a shorter term agreement of five years with options to extend based on performance provide a reasonable length of contract for the operator while limiting the exposure to the owner due to poor performance or unforeseen contract issues. The longer lease is usually encountered when the operator invests in the revenue-producing components of the project.

In nearly all cases, this approach will result in less revenue being returned to the municipal owner when compared to competent internal staff, simply because an additional party is involved with reasonable expectations to make a profit by providing a valuable service. Some owners find the trade-off of lower returns for fewer operational challenges in-house to be a reasonable compromise. On the other hand, the owner generally retains much of the financial risk associated with operating the harbor while the potential rewards are reduced.



Licensee / Leasehold Operator

The Licensee / Leasehold Operator approach is similar to the third party operator approach, except more of the risk is transferred to the operator. The premise of this approach is that the operator leases a specific property and constructs and operates a for-profit harbor on leased public land. The owner negotiates a lease arrangement with the operator, who then does everything required to operate a successful harbor. The return for the municipality is generally fixed regardless of the financial performance of the harbor, but this can vary by contract. Additionally, the financial risk associated with the harbor is generally shifted from the owner to the leaseholder.

In some cases, the municipal owner agrees to construct certain nonrevenue-producing infrastructure elements such as breakwaters, roads, and parking as an incentive to the harbor licensee. This is often the case when the harbor is constructed as part of a waterfront revitalization project and the municipality is eligible for state or federal funding for infrastructure improvements that a private developer would not be eligible for.

This scenario generally provides the lowest financial return for the municipal owner, along with the lowest risk.

Proposed Operational Approach

As outlined above, all options under consideration are potentially viable. The primary differences among the various operational alternatives are financial cost/benefit to the City, convenience, flexibility and responsiveness. Potential options including the sale of the harbor to a private operator or closing of the facility are covered in the Concept Alternatives section of this report.

The “Municipal Operation” alternative is well within reasonable expectations of competent municipal employees and should be the most financially beneficial approach for the City. This is particularly true given the relative simplicity of the proposed operation, which excludes more complex activities such as mechanical, electrical, and fiberglass repair services. Further, this approach provides the most flexibility and responsiveness to changing market conditions and developing environmental best practices.

The most significant challenges in this approach are securing the necessary construction funding and transitioning existing lease rates to levels necessary to cover operational expenses, construction costs, and establishment of sufficient reserve funds to cover future replacement of infrastructure. The increase in rates will likely be significant, which will reduce demand for slips in the short term and potentially the long term. Additionally, potential challenges include the hiring of additional municipal employees and liability for potential operational losses. The employment cost issues could be mitigated by minimizing full time staff and seeking out primarily part-time employees. The potential for operating losses are real, and a careful strategy for implementing harbor improvements in a phased approach to match market demand will be critical. The proposed approach to construction of the harbor is to build in phases, with timing of the phases based on the rate of absorption and a “waiting list” to be developed for the “next phase” proposed. This approach will limit initial construction costs, minimize risk, avoid building beyond the market, and allow for modifications to the amenities, program, and facilities provided to closely match market demand.



Operational Expense Analysis

In our experience working with literally hundreds of harbors in the Midwest and across the country, average maintenance and operational expenses for efficiently laid out harbors generally run \$500 per slip per year. The configuration of Ellis Harbor is not considered “efficient” due to the length of shoreline protection, and generally operations and maintenance costs are incurred whether a slip is occupied or not. By this estimate, yearly operations and maintenance costs should be approximately \$136,000 for a 272 slip marina in an efficient configuration.

The following breakdown of expenses reflects estimated historic expenditures based on staff scheduling and expenses. Clearly, the years following the recent flood were extraordinary, and those efforts and expenses are not included in this analysis. Moving forward, we recommend that an enterprise district be established and all expenses tracked separately to accurately determine yearly operations and maintenance expenditures.

Typical Yearly Ellis Harbor Operational Expenses include the following:

Insurance @ \$100 per slip:	\$ 27,200
Utilities @ \$100 per slip:	\$ 27,200
Mowing, Trash, Restrooms, etc*:	\$ 48,360
Repairs**:	\$ 34,000
<u>Administration:</u>	<u>\$ 18,500</u>
Total:	\$155,260

* Based on estimated 62 hours per week for 26 weeks @ \$30/hour loaded labor rate

** Includes staff time and \$10,000 yearly budget for materials

The numbers indicated for insurance and utilities are consistent with our experience assessing and appraising literally hundreds of harbors. The basic maintenance (mowing, trash, restrooms, etc) figure is higher than we typically see for a highly efficient harbor of 272 slips, but consistent with our expectations for the less efficient layout present in Ellis Harbor. Repair costs are higher than we typically expect, but this is consistent with a facility with functionally obsolete infrastructure. Administration costs are somewhat higher than typical, but consistent with a facility that is operating on a budget that is too lean. A modern facility, efficiently laid out, with infrastructure in good condition and satisfied tenants takes far less time to operate and manage than an inefficient facility with worn out infrastructure and unhappy tenants.



Should the decision be made to relocate Ellis Harbor to the Cove, we anticipate the following Operations and Maintenance Budget:

The Cove Site Operational Expenses includes the following:

Insurance @ \$100 per slip:	\$ 27,200
Utilities @ \$100 per slip:	\$ 27,200
Maintenance and Repairs @ \$85 per slip:	\$ 23,120
Labor/Wages*:	\$ 49,920
<u>Administration:</u>	<u>\$ 8,500</u>
Total:	\$135,940

* Labor/Wages include Harbor Manager at \$15,600 per year (\$30 hour, 20 hours per week, 26 weeks) and Maintenance Staff at \$34,320 per year (\$30 hour, 44 hours per week, 26 weeks)

We recommend that the harbor be run primarily by part time staff to minimize labor costs if possible. For example, a good candidate for harbor manager would be a boater at retirement age looking for seasonal part time work at a salary just less than the Social Security maximum allowable income. In many cases, this type of person already spends a good deal of time at the harbor, knows the boaters well, and is in a good position to keep an eye on things whether officially working or not.

For the purposes of establishing Operations and Maintenance budgets for our financial analyses of the preferred Concept Alternates, we will be using \$550 per slip for the existing Ellis Harbor site, and \$500 per slip for the Cove site due to the fundamental differences in the sites.





FINANCIAL ANALYSIS

Revenue / Cash Flow

Revenues included as part of this income analysis are based on seasonal slip leases and boat launch revenues. This report documents income based on the current rate structure as approximately \$100,000 per year. As outlined previously, this income is sufficient to cover current operational expenditures, but insufficient to cover reserve funding, replacement of obsolete infrastructure, or projected operational expenses. This report therefore identifies the necessary income levels required to fund the alternatives proposed.

The current rate structure for Ellis Harbor is as follows:

	Early Rate	Standard Rate
Boat Harbor Stalls – Resident:	\$380	\$453
Boat Harbor Stalls – Non-resident:	\$510	\$610
Slips – Resident:	\$206	\$247
Slips – Non-resident:	\$280	\$330

The majority of boaters take advantage of the Early Rate. The revenue from the 2011 was approximately \$96,000

Proposed Seasonal Rate Structure

Our proposed rate structure is based on defining the rates necessary to cover projected operational, construction, and reserve funding to create a viable business model that is sustainable over the long term. Due to a lack of private competition, this structure does not propose rate increases to market value, but rather identifies anticipated expenses and lease rates necessary to cover those costs.

The low demand for boat slips reflects both the recent difficult economy and lack of amenities and boatable area on the Cedar River. This market is very fluid due to boaters having other choices and the relative ease of trailering the boat instead of leasing a slip. Therefore, proposed increases are lower than boat harbor stalls. The boat harbor stalls represent a unique offering in this market, and are less impacted by the relatively limited water body. Further, the convenience of the Ellis Harbor location increases the value of these stalls, which essentially serve as floating weekend homes. Coupled with higher demand for these stalls, the proposed rate increases are higher than boat slips.

Propose Boat Launch Rate Structure

We recommend launch rates that are roughly 20% lower than the average boat launch rates utilized at many sites across the Midwest for similar launch facilities:

- Seasonal Launch Pass: \$100
- Individual Day Launch Pass: \$5



As no fees are currently charged and no usage data is available, this report relies on estimates based on parking capacity and anecdotal reports on usage. We recommend that usage statistics be kept beginning in the 2012 boating season to improve the accuracy of financial projections. Based on the presence of space for approximately 30-40 vehicle/trailers and public comments that parking is insufficient on weekends, we estimate that on average approximately 50 boaters utilize the launch facility on weekend days, and five per day on weekdays. This results in a rough estimate of 125 launches on average per week. Our experience indicates that roughly half of these boaters would purchase seasonal passes, and the others would be individual users.

- Seasonal Pass Launch Revenue (65 seasonal passes @ \$100 per year): \$6,500
- Individual Day Launch Pass Revenue (60 day users per week over 26 weeks @ \$5 per launch): \$7,800

Total Estimated Yearly Boat Launch Income: \$14,300

Individual Concept Financial Analysis

The rates outlined in the analyses that follow assume 100% occupancy of 104 boat slips and 170 boat stalls. Obviously, 100% occupancy is unlikely in the near term, particularly with the significant rate increases proposed. However, these analyses convey the general order of magnitude prices that will be required to achieve a financially sustainable business model.

Each analysis results in a balance sheet near breakeven. Over the course of the first thirty year revenue bond period, the cost of all improvements will be paid for, and after thirty years all income above Operations and Maintenance Costs will be available for reserve funding, replacement of obsolete infrastructure, rate decreases, or other infrastructure.

At the end of the first thirty year period, the plan assumes that the revenue producing infrastructure (floating docks, piles, and associated utilities) will need to be replaced. The revenue producing costs are identified in the analyses, and generally represent approximately half the total cost of construction. Assuming the lease income remains constant, the revenue producing infrastructure can easily be replaced and a sufficient reserve can be established for replacement of non-revenue producing infrastructure following the end of the second thirty year period. Non-revenue producing infrastructure like shoreline armoring typically has a lifespan of 50-80 years with proper ongoing maintenance.

Expenses

The expenses considered for this harbor analysis include construction costs and operational costs.

Construction Costs

Construction costs for the harbor include demolition of existing facilities and construction of new revenue producing facilities including gangways, fixed or floating dock structures, anchorage systems, ice suppression, dock amenities, boater services building, and utilities. Non-revenue producing elements include shoreline protection structures, dredging, parking infrastructure, and landscape.



In determining the estimated construction costs for the revenue producing dock systems, actual 2010/2011 construction costs and bid estimates from ongoing projects in the Midwest were considered. Landside infrastructure elements including roads, parking, utilities, landscape, and park elements were estimated utilizing recent 2011 construction costs and adjusted based on our experience in civil construction and anticipated price escalation.

Operational Costs

Operational expenses for the proposed harbor operations will range from \$500 - \$550 per slip depending on the harbor location as outlined in the Operations and Maintenance section of this document. We recommend a municipal harbor operation that excludes labor intensive activities lift wells, maintenance, and repair of boats.

Revenue Bond Financing Costs

Revenue bond funding costs are based on the credit rating of the municipality and the length of the bonding period. The rates utilized in the analyses that follow are based on a AAA municipal credit rating over a period of 30 years, which currently is near 4.5%. Concept A1 includes a second analysis at 4.25% for 20 years due to the likely shorter lifespan of the improvements.

As an alternative to outside bonding, some communities decrease their financing costs by borrowing from internal budgets such as pension funds at significantly lower rates. While this option has not been included in this report, it may be worth considering depending on the financial strength of those funds.

Summary Financial Analysis

	Construction Cost	Debt Service	Yearly O&M	Stalls	Slips	Average Including O&M
Concept A:	Undefined	n/a	\$550 +?			
Concept A1:	\$4.75 million	\$292k	\$550	\$2,091	\$550	\$1,614
<i>Concept A1*:</i>	<i>\$4.75 million</i>	<i>\$357k</i>	<i>\$550</i>	<i>\$2,476</i>	<i>\$550</i>	<i>\$1,853</i>
Concept B:	\$8.7 million	\$534k	\$550	\$3,518	\$550	\$2,458
Concept C:	\$10.1 million	\$620k	\$550	\$4,024	\$550	\$2,772
Concept D:	\$6.8 million	\$417k	\$500	\$2,779	\$500	\$1,981
Concept E:	\$5.8 million	\$356k	\$500	\$2,421	\$500	\$1,759
Concept F:	\$500,000	n/a	n/a			

**Concept A1 at 4.25% for 20 years*



Concept A1 Financial Analysis – Repair and Reinforce Existing Sheet Pile Infrastructure – 30 years @ 4.5%

Construction Costs

▪ Estimated Construction Costs:	
o Revenue Producing Infrastructure:	\$ 980,000
o Non-revenue Producing Infrastructure:	\$3,770,000
Total Estimated Construction Costs:	\$4,750,000

Proposed Revenues

▪ Seasonal Revenue, 100% occupancy:	
104 Boat Slips @ \$550	\$ 57,200
<u>170 Boat Stalls @ \$2,091</u>	<u>\$355,470</u>
Lease Revenue Subtotal:	\$412,670
▪ Boat Launch Revenue:	
Seasonal Pass Revenue:	\$ 6,500
<u>Day Launch Revenue:</u>	<u>\$ 7,800</u>
Boat Launch Revenue Subtotal:	\$ 14,300
▪ Storage Revenue:	\$ 15,280
	Total Gross Revenue: \$442,250

Anticipated Expenses

Debt Service on \$4.75 million at 4.5% for 30 years:	\$291,600
<u>Operations & Maintenance:</u>	<u>\$150,700</u>
Net Revenue:	\$ (50)

Assessment:

During the initial thirty year bonding period, the project will essentially break even at the rates identified above. At the completion of the initial thirty year period, the reinforced/repaired infrastructure will need to be replaced, at which point one of the other concepts proposed in this report will need to be implemented.



Concept A1 Financial Analysis – Repair and Reinforce Existing Sheet Pile Infrastructure – 20 years @ 4.25%

Construction Costs

▪ Estimated Construction Costs:	
o Revenue Producing Infrastructure:	\$ 980,000
o Non-revenue Producing Infrastructure:	\$3,770,000
Total Estimated Construction Costs:	\$4,750,000

Proposed Revenues

▪ Seasonal Revenue, 100% occupancy:	
104 Boat Slips @ \$550	\$ 57,200
<u>170 Boat Stalls @ \$2,476</u>	<u>\$420,920</u>
Lease Revenue Subtotal:	\$478,120
▪ Boat Launch Revenue:	
Seasonal Pass Revenue:	\$ 6,500
<u>Day Launch Revenue:</u>	<u>\$ 7,800</u>
Boat Launch Revenue Subtotal:	\$ 14,300
▪ Storage Revenue:	\$ 15,280
	Total Gross Revenue: \$507,700

Anticipated Expenses

Debt Service on \$4.75 million at 4.25% for 20 years:	\$357,000
<u>Operations & Maintenance:</u>	<u>\$150,700</u>
Net Revenue:	\$ 0

Assessment:

During the initial twenty year bonding period, the project will essentially break even at the rates identified above. At the completion of the initial twenty year period, the reinforced/repaired infrastructure will need to be replaced, at which point one of the other concepts proposed in this report will need to be implemented.



Concept B Financial Analysis – Renovate in Place with Rip Rap

Construction Costs

▪ Estimated Construction Costs:	
o Revenue Producing Infrastructure:	\$4,309,000
o Non-revenue Producing Infrastructure:	\$4,391,000
Total Estimated Construction Costs:	\$8,700,000

Proposed Revenues

▪ Seasonal Revenue, 100% occupancy:	
104 Boat Slips @ \$550	\$ 57,200
<u>170 Boat Stalls @ \$3,518</u>	<u>\$598,060</u>
Lease Revenue Subtotal:	\$655,260
▪ Boat Launch Revenue:	
Seasonal Pass Revenue:	\$ 6,500
<u>Day Launch Revenue:</u>	<u>\$ 7,800</u>
Boat Launch Revenue Subtotal:	\$ 14,300
▪ Storage Revenue:	\$ 15,280
	Total Gross Revenue: \$684,840

Anticipated Expenses

Debt Service on \$8.7 million at 4.5% for 30 years:	\$534,000
<u>Operations & Maintenance:</u>	<u>\$150,700</u>
Net Revenue:	\$ 140

Assessment:

During the initial thirty year bonding period, the project will essentially break even at the rates identified above. At the completion of the initial thirty year period, Net Revenue (after O&M costs) will remain constant at \$534,140 in today's dollars. Debt service on replacement of revenue producing infrastructure (\$4,309,000) is \$264,536 per year at 4.5% for 30 years. This will leave a surplus of \$269,604 per year for future reserve funding, expansion of infrastructure, or rate reductions.



Concept C Financial Analysis – Renovate in Place with Sheet Pile

Construction Costs

▪ Estimated Construction Costs:	
o Revenue Producing Infrastructure:	\$4,309,000
o Non-revenue Producing Infrastructure:	\$5,791,000
Total Estimated Construction Costs:	\$10,100,000

Proposed Revenues

▪ Seasonal Revenue, 100% occupancy:	
104 Boat Slips @ \$550	\$ 57,200
<u>170 Boat Stalls @ \$4,024</u>	<u>\$684,080</u>
Lease Revenue Subtotal:	\$741,280
▪ Boat Launch Revenue:	
Seasonal Pass Revenue:	\$ 6,500
<u>Day Launch Revenue:</u>	<u>\$ 7,800</u>
Boat Launch Revenue Subtotal:	\$ 14,300
▪ Storage Revenue:	\$ 15,280
	Total Gross Revenue: \$770,860

Anticipated Expenses

Debt Service on \$10.1 million at 4.5% for 30 years:	\$620,054
<u>Operations & Maintenance:</u>	<u>\$150,700</u>
Net Revenue:	\$ 160

Assessment:

During the initial thirty year bonding period, the project will essentially break even at the rates identified above. At the completion of the initial thirty year period, Net Revenue (after O&M costs) will remain constant at \$620,160 in today's dollars. Debt service on replacement of revenue producing infrastructure (\$4,309,000) is \$264,536 per year at 4.5% for 30 years. This will leave a surplus of \$355,624 per year for future reserve funding, expansion of infrastructure, or rate reductions.



Concept D Financial Analysis – Reconfigure Ellis Harbor to Single Basin

Construction Costs

▪ Estimated Construction Costs:	
o Revenue Producing Infrastructure:	\$2,538,250
o Non-revenue Producing Infrastructure:	\$4,261,750
Total Estimated Construction Costs:	\$6,800,000

Proposed Revenues

▪ Seasonal Revenue, 100% occupancy:	
104 Boat Slips @ \$500	\$ 52,000
<u>170 Boat Stalls @ \$2,779</u>	<u>\$472,430</u>
Lease Revenue Subtotal:	\$524,430
▪ Boat Launch Revenue:	
Seasonal Pass Revenue:	\$ 6,500
<u>Day Launch Revenue:</u>	<u>\$ 7,800</u>
Boat Launch Revenue Subtotal:	\$ 14,300
▪ Storage Revenue:	\$ 15,280
	Total Gross Revenue: \$554,010

Anticipated Expenses

Debt Service on \$6.8 million at 4.5% for 30 years:	\$417,000
<u>Operations & Maintenance:</u>	<u>\$137,000</u>
Net Revenue:	(\$10)

Assessment:

During the initial thirty year bonding period, the project will essentially break even at the rates identified above. At the completion of the initial thirty year period, Net Revenue (after O&M costs) will remain constant at \$417,010 in today's dollars. Debt service on replacement of revenue producing infrastructure (\$2,538,250) is \$155,800 per year at 4.5% for 30 years. This will leave a surplus of \$261,210 per year for future reserve funding, expansion of infrastructure, or rate reductions.



Concept E Financial Analysis – Relocate Ellis Harbor to the Cove

Construction Costs

▪ Estimated Construction Costs:	
o Revenue Producing Infrastructure:	\$3,683,520
o Non-revenue Producing Infrastructure:	\$2,116,480
Total Estimated Construction Costs:	\$5,800,000

Proposed Revenues

▪ Seasonal Revenue, 100% occupancy:	
104 Boat Slips @ \$500	\$ 52,000
<u>170 Boat Stalls @ \$2,421</u>	<u>\$ 411,570</u>
Lease Revenue Subtotal:	\$ 463,570
▪ Boat Launch Revenue:	
Seasonal Pass Revenue:	\$ 6,500
<u>Day Launch Revenue:</u>	<u>\$ 7,800</u>
Boat Launch Revenue Subtotal:	\$ 14,300
▪ Storage Revenue:	\$ 15,280
	Total Gross Revenue: \$ 493,150

Anticipated Expenses

Debt Service on \$5.8 million at 4.5% for 30 years:	\$ 356,000
<u>Operations & Maintenance:</u>	<u>\$ 137,000</u>
Net Revenue:	\$ 150

Assessment:

During the initial thirty year bonding period, the project will essentially break even at the rates identified above. At the completion of the initial thirty year period, Net Revenue (after O&M costs) will remain constant at \$356,150 in today's dollars. Debt service on replacement of revenue producing infrastructure (\$3,683,520) is \$226,137 per year at 4.5% for 30 years. This will leave a surplus of \$130,013 per year for future reserve funding, expansion of infrastructure, or rate reductions.





RECOMMENDATION / IMPLEMENTATION STRATEGY

We believe the best opportunity for creating a financially sustainable harbor is to implement Concept E, the relocation of Ellis Harbor to the cove site. This could be accomplished in a series of small phases based on market demand, but phased construction should be completed within a three to five year period. During this period, corresponding portions of the existing harbor would be closed, starting with the areas in the worst condition.

Despite being the lowest cost option, the increase in lease rates required to relocate the harbor remains significant. Due to the relative uncertainty of the market for slips at these higher rates, we recommend that the City implement a waiting list to determine actual demand prior to commitment to the number of new slips to be constructed. One potential phasing plan could follow this approach:

- 1) Identify two of the four existing portions of the harbor for closure two years prior to commencement of construction. We would recommend beginning with West because it has the least convenient parking and EEE due to lowest occupancy rate.
- 2) All boaters in the harbor would be given the opportunity to shift to the relocated facility and would sign up for a new slip/stall. All boaters on the current waiting list would have the opportunity to lease a slip in the new facility, as well as anyone else interested. This list would serve as the basis for sizing the initial phase of construction.
- 3) All boaters on EEE would relocate to the new facility, utilizing the relocated existing docks.
- 4) Boaters on West would have the opportunity to move to the new facility, or to spaces vacated on East or EE.
- 5) The new facility is constructed based on demand, and West and EEE are closed.
- 6) The process is repeated for East and EE within two years.

Rate Structure

We recognize that the rates identified are significantly higher than the current rates, as is often the case when an aging harbor is completely renovated. We find that when rates increase by double or more, roughly 30% of the existing boaters leave the harbor. In stable markets, over the course of three to five years, occupancy returns to pre-renovation levels. The unfortunate truth is that the current rates will not sustain the harbor for the long term, and some boaters simply cannot afford the new higher rates. When this occurs, some harbor managers choose to implement a phased transition to higher rates, with some boaters receiving a lower rate subsidized as part of the overall rate structure. For example, the City may choose to offer veterans or seniors who have been leasing at the harbor for ten years or more a lower rate.

We believe the current rate structure generates funds insufficient for the operation and immediate critical repairs needed for ADA compliance, and rates at the current facility should increase by 20%-40% immediately to address these needs. Two options exist for implementing the higher rates at the new facility. First would be to transition rates over the course of several years based on the length of time a boater has leased in Ellis Harbor. While this will ease the transition, it will also increase the rates in the long term since the initial funding shortfalls will need to be made up over time. For example:



- Boaters present in Ellis Harbor for ten years or more: Transition to the new rate in even increments over a period of five – seven years
- Boaters present in Ellis Harbor for five years or more: Transition to the new rate in even increments over a period of three - five years.
- Boaters present in Ellis Harbor for less than five years: Transition to the new rate in even increments of two years.
- New boaters utilize new rates immediately

The second option would simply charge new rates when boaters transition to the new facility. While a more significant immediate increase, it will ultimately result in lower rates over the long term since early shortfalls will not need to be made up.

Schedule

The proposed implementation plan could be completed in five years. The first two years would be focused on design and permitting, with construction commencing in time for completion during the third year. Additional phases could be completed in years four and five, with an orderly closing of the current facility in five years. Alternatively, the City could simply choose to construct the entire new harbor in a single phase. That would reduce construction costs and speed the process, and could be completed in three to four years.

Funding Sources

Beyond traditional funding sources such as capital funds, municipal harbors are often funded through a combination of revenue bond funds and grant funding.

Revenue Bond Funding

Revenue bonds are a common funding mechanism for municipal harbors and marinas. The bond is repaid by revenues generated by the infrastructure funded, so in this case the bond would be repaid by lease payments from the boaters. The maximum size of the bond is determined by the revenues generated and the interest rates are determined by the municipality's credit rating.

Grant Funding

We believe that the Cove option is the best opportunity for long term financial sustainability due to the fact that it solves the fundamental efficiency issues and is the lowest cost option. In addition, though, we also believe that this option may create the most opportunities for possible outside grant or partnership funding from State and Federal agencies such as the Department of Natural Resources, US Fish & Wildlife Service, or US Army Corps of Engineers.



The current location of Ellis Harbor creates a greater impact on the floodway than the cove site, and the area could be returned to a more natural flood zone habitat over time. This would expand the recreational opportunities near Robbins Lake, and potentially help solve some of the water quality issues present both there and in Ellis Harbor.

The boaters of Ellis Harbor have proven themselves resilient and capable of working with their state legislators. In collaboration with the City, we believe a target of one – two million dollars in partnership funding from state and federal resources is a realistic target, and this could potentially reduce the lease rates required to construct the cove concept by \$500 or more per year.

Immediate Actions:

- 1) Immediately implement repairs to all sidewalks adjacent to the sheet pile walls to comply with ADA standards by March 15, 2012. Establish a budget for continuing and ongoing repairs to address subgrade failures if sheet pile wall is not repaired at the same time.
- 2) Establish Ellis Harbor as an “enterprise district” similar to the golfing facilities whereby all income and expenses related to the Harbor are tracked separately from other Park Department and City expenses. This will allow direct tracking of costs to better understand the actual cost of operation, maintenance, and repair of the facility.
- 3) Restructure current lease rates to cover the costs of items 1-2 above based on actual rather than estimated expenses.
- 4) Initiate preliminary engineering to confirm viability of Cove option
- 5) Initiate grant funding proposals
- 6) Commence final design and implementation

Potential Alternative Actions

Should the preliminary engineering show that the Cove concept is not viable, or if the community simply decides that remaining in the current location of Ellis Harbor is preferable, we recommend pursuing Concept B, renovating Ellis Harbor in place. This will ultimately result in higher costs and rates for the boaters, as well as significant inconvenience as portions of the construction may need to be completed during the boating season. However, if enough boaters remain at the higher rates, it is a potentially sustainable business model.

In this case, the rate structure increases should commence immediately along with initial repairs begun next spring. Phased implementation of the rock revetment should begin on West and move to East, EE and then EEE as rapidly as possible. Design and permitting will likely take two years, but some ADA improvements can begin immediately.





MARKETING STRATEGY

In order to increase occupancy of the existing harbor or launch an expanded new harbor, a coordinated marketing plan will be needed to introduce the new and/or improved facilities to the boating public. The market analysis portion of this document has identified unmet demand for boathouse slips in the area, so this plan is designed to reach these potential customers.

The feasibility study process to date has created some awareness of the potential harbor improvements within the boating community and also across the region due to coverage in newspapers. As the design process progresses, a continuing effort to keep the community informed and participating in the process will help spread the word and attract more interest. The existing waiting list provides some basic information, but once the decision is made to move forward with a new or improved existing harbor, a more proactive marketing program will help fill the harbor. We recommend the following strategies be considered:

- **Boat Show Attendance:** One of the best ways to reach the target audience of boaters is to promote the harbor at regional boat shows. Boat shows are generally held in the winter months, and are a very popular diversion for boaters waiting for spring. As a high percentage of new boat sales occur at boat shows, locating a slip for that new boat is a part of the purchasing equation.
- **Boating Periodicals:** Periodicals such as Great Lakes Boating reach a wide range of boaters and can be found in every harbor lounge, boater services building, and boat dealership. These periodicals are often looking for interesting new stories, so a feature article is a real possibility to parallel a paid advertisement campaign in these magazines.
- **Web Presence:** As word gets out about the harbor, boaters will search the internet for information. Establishing a web site for the new harbor will help boaters interested in the harbor to follow the progress of design and implementation, sign up for email news updates, and “follow” the harbor on social networking sites such as Facebook or Twitter.
- **Waiting Lists:** As word of the new and/or improved harbor starts to get out, people will want to join a waiting list for the new harbor, and establishing this list will help guide the harbor design to accommodate boater interest.





CONCLUSION

We believe boating on the Cedar River and Ellis Harbor can be sustainable in the long term. The transition from the current situation to a new facility which provides the appropriate level of service to the boaters, is easy to maintain, and financially sustainable will be challenging, but the results will ensure Ellis Harbor continues to provide great boating opportunities well into the future.

NEXT STEPS

The next steps in the consideration of renovation or relocation of Ellis Harbor include two parallel efforts, completion of a preliminary engineering study and identification of potential outside funding sources.

The primary objective of the preliminary engineering study is to develop the proposed concept to a higher level of detail, confirm assumptions, and refine the cost estimate. Tasks include:

- Survey / Bathymetry / Geotechnical
- Preliminary Engineering Design and Calculations
 - Initial Marine Engineering Analysis
 - Initial Structural Engineering Analysis
 - Initial Geotechnical Analysis
 - Initial Site / Civil / Accessibility Analysis
 - Refined Cost Estimate
- Permit Application / Environmental Assessment (IDNR and USACE)
- Permit Processing
- Specialized Studies that may be required by Environmental Assessment:
 - Sedimentation Analysis
 - Archeological Assessment / Historic Preservation Assessment
 - Threatened and Endangered Species

Securing outside funding requires a creative, sustained and coordinated effort over time. The design of the harbor should be shaped in part by available funding, and opportunities to obtain funding under a wide range of programs should be pursued. For example, the design of some elements like the stone revetment may be able to be modified to create wildlife habitat. The incremental cost may be minor, but this may qualify the project for a grant while improving the environment and experience for boaters and wildlife alike. Ultimately, Ellis Harbor is a treasured resource, and restoring it can be made easier through partnership funding while improving the overall quality of the boating experience.



Ellis Harbor Business Plan and Feasibility Study
Appendix
November 9, 2011

Market Analysis Summary

	Area (<50mi) \$/YR	Regional (50-250mi) \$/YR	2011 Ellis Harbor Rates	
			Resident	Non-Res
Average Slip Rate 20-24'	\$974	\$1,315	\$247	\$330
Boat House Stall			\$453	\$610
Average 40' Slip (Potential Houseboat)	\$2,228	\$2,330	\$453	\$610
Average 50' Slip (Potential Houseboat)	\$2,578	\$2,816	\$453	\$610
Average Seasonal Occupancy	Full	90%	Stalls: Full, 80% Res; Slips: 50% Filled, 72% Res	Stalls: Full, 20% NonRes; Slips: 50% Filled, 28% NonRes
Average Waiting List	1 of 2 Respondents Have a Wait List	9 of 18 Respondents Have a Wait List	8	1
Average On-Site Outdoor Winter Storage (800SF)	\$425	\$403	\$265 (20'x40')	\$345 (20'x40')
Average Boat Launch	\$5/Day \$125/YR	\$9/Day \$125/YR	Free	Free
Average Jet Ski Dock	\$534	\$533	N/A	N/A

Market Analysis - Boat Houses/Floating Homes

Marina	Price of Home	Taxes	Fees	Unit Size
Sea Village Marina Northfield, New Jersey	\$135,000	None	Dock Fee: \$925/Month Includes: Sewer, Water, Trash, Parking	14' Wide x 42' Long
Sea Village Marina Northfield, New Jersey	\$188,000	None	Dock Fee: \$925/Month Includes: Sewer, Water, Trash, Parking	14' Wide x 35' Long
Mountain Lake Marina Norris Lake, TN	\$179,500-302,500	None	\$250-650/Month House Boat Fee (Depends on Location) Includes: Water, Sewer, Dock Maintenance, Trash, Covered Boat Slip, 1/2 Price on a Regular Slip for Extra Boat or Jet Ski, Slip Usage and Maintenance Beside Flotation	36' Wide x 50' Long
Columbia Crossing Portland, Oregon	\$264,000	\$2,758	HOA Fee: \$763/Month Includes: Boat Slip, Commons, Garbage, Management, Sewer, Water	40'x43'
Marina Wes-Del Delta, BC	\$251,086	Same as "Real Property" Tax (\$7,500)	Maintenance: \$175/Month Mortgage Includes: Permanent Moorage, Covered Garage w/Storage Loft, & One Open Parking Space	25'x35'
Marina Wes-Del Delta, BC	\$654,438	\$2,916	Maintenance: \$300/Month Includes: Ownership of Slip, Parking, Docks, Dock Insurance, Management, Lease to River \$500/Month for Rent	
Ladner Reach Marina Ladner, BC	Moorage: \$20,000 for 10-year contract (\$2000/YR)	Included in Operating Expenses	\$350/Month for Operating Expenses: Includes: Potable Water, Parking, Storage Shed, Garbage, Recycling, Property Taxes, Water Lot Lease Fees, Maintenance, Administration	Up to 22' Wide x 38' Long
Coal Harbour Marina Vancouver, BC	Moorage: 40% More than Recreation Boating	Property Tax is Paid as a Live-Aboard License to the city: About \$1500	Monthly Service Fee: \$15 Includes: Garbage, Water, Recycling	
Mosquito Creek North Vancouver, BC	\$266,832-476,378	\$8000-14,300	\$795-\$1000/Month	
Industry Average Costs	\$300,732	\$6,080	\$589/Month	25'x40'
Ellis Harbor	\$0-150,000 (No Slip Ownership/ Rights Included)	\$0	Resident: \$453/Year (\$37.75/Month) NonResident: \$610/Year (\$50.83/Month)	24'x42'

Marina	Wet Slip Breakdow	Slip Size	Seasonal Rates	Transient Rates \$/LF	Waiting List
Scales Pointe Marina Coralville Lake, IA	135 Slips	8x20 to 23x90 About 25 House Boat Slips	Wooden Pontoon Docks: \$850/Year (3-Year Lease: \$800/YR); Concrete Pontoon Dock: \$1350/Year (3-Year Lease: \$1250/YR); Covered Concrete Docks: 10'x26': \$2000/Year (3-year Lease: \$1900/YR); 12'x34': \$2300/Year (3-Year Lease: \$2200/YR); Houseboat Docks: >40':\$60-70/FT; <40':\$50/FT (for additional feet over 40'); Jet Ski Slips: \$650/Year (3-Year Lease: \$500/YR);	Free Day-Use No Overnight/ No utilities	About 30 People
Mid River Marine Coralville Lake, IA	200 Slips	20': 80; 30': 12; 50': 8; 90': 2	Pontoon Slip: \$700/YR Runabout Slip: \$909-1027/YR Houseboat Docks: >42' with Electricity: \$51.50-58/FT/YR <42' with Cruiser & Electricity: \$49.84-54/FT/YR Jet Ski Port: \$451-532/YR	N/A	No, but Always Full
Coralville Lake Marina Coralville Lake, IA			Uncovered Runabout/Pontoon Slip: \$995 Covered Slips in Water: <20': \$1050; 21-23': \$1095; 10' Wide: \$1950; 12" Wide: \$1950; Covered Hoist: <20': \$1620; 21-23': \$1835; 24-28' Old Dock: \$2195; 24-30'; New Dock: \$2295; Houseboat Docks: \$1895; Jet Ski Port: \$500		
Clear Lake Boats Marina Clear Lake, IA Private Oak Hill	80+ Slips	All 24'	\$2,000	N/A	About 20 People
Marina Lake Okoboji, IA Parks			Hoist Rentals: <21': \$2450-2950; 22-24': \$2850-3350; 25-30': \$3050-3550; PWC: \$625-925		
Marina Inc Lake Okoboji Coulter's Panorama		Covered & Uncovered			
Marine Lake Panorama, IA	103 Slips	All 10x24 Covered	\$1,500	N/A	16 People
Saylorville Lake Marina Saylorville Lake, IA	394 Slips	Covered & Uncovered 24-60' Mostly 24-28'	Covered: 12x24': \$2369; 12x28': \$2672; 14x32': \$3525; Uncovered: 10x24': \$1823(no elec); 12x24': \$1823(no elec); 12x24': \$2022; 12x28': \$2054(no elec); 12x28': \$2279; 14x30': \$3046; 14x32': \$3046 Jet Ski: \$700	\$25/Night	Yes, Mostly for Buoy Moorings
Rathbun Lake Marina Rathbun Lake, IA	360 Slips	Covered: 24-60' Uncovered: 22-70'	Average: \$70/LF	Yes Weekday Rates, Weekend Rates	Yes
Southfork Marina Rathbun Lake, IA		Covered: 20' & 22' Uncovered: 30-50'	Average: \$70/LF	Covered 20-22': \$15/Night Uncovered >30': \$20/Night	
Red Rock Marina Lake Red Rock, IA Frentress Lake	130 Slips	Covered Slips: 50	Uncovered: 12x24': \$1590; 13x32': \$2100; 14x40': \$2800; 23x70': \$4200 Covered: 12x24': \$1740; 13x32': \$2240		
Marine East Dubuque, IL	340 Slips	Covered & Uncovered 8x20'-17x60'	\$630-3000 (Smaller Slips Include Elec., Larger Slips are Metered)	When Available (Currently All Leased Out)	About 100 People
Dubuque Yacht Basin Dubuque, IA	256 Slips	26-50' Covered & Uncovered	\$1195-4600	14 Slips \$1/Night	20 People
Mid-Town Marina East Dubuque, IL	250 Slips	18-65'	Tie Along: 18': \$435; 20': \$290-520; 21': \$425; 24': \$525-750; 28': \$720-790; 30': \$775; 40': \$1995; 50': \$1765; Uncovered: 9x20': \$485-510; 10x20': \$545; 11x24': \$615-900; 14x36': \$1400; 16x40': \$1590; 16x50': \$1995; 18x40': \$1650; Covered: 8x18': \$750; 9x20': \$840; 9x21': \$850; 9.5x20': \$950; 9.5x24': \$1010; 11x24': \$1250; 11x28': \$1500; 12x28': \$1525; 14x30': \$1650; 15x36': \$1735; 15x40': \$2125; 17x50': \$3250; 17x60': \$3950; Jet Ski Lifts: \$420	\$1/Night	About 100 People; Mostly 24-28' Slips
Massey Marina Dubuque, IA	About 100 Slips	12 Houseboat Slips 30': 5; 33': 5; 36': 7; 10x20': 83	Uncovered Houseboat 30', 33', 36': \$2000; Covered 10x20' (No Elec/H2O): \$550; Uncovered (No Elec/H2O): \$360-420	\$10/Night	About 100 People
Sunset Marina Rock Island, IL Mississippi	473 Slips	Uncovered: 16': 8; 20': 111; 22': 16; 25': 75; 26': 24; 28': 3; 30': 2; 36': 34; 42': 47; 50': 10; 60': 1; Covered: 20': 25'; 10; 26': 14; 28': 28; 30': 28; 32': 7; 35': 7; 36': 14; 40': 8; 42': 13; 50': 10; 60': 3	Uncovered No Power: \$29.91/LF Uncovered With Meter: \$46.90-49.04/LF; Uncovered With Elect.: \$44.77-46.90/LF; Covered With Meter: \$60.75-63.51/LF; Covered With Electricity: \$60.75-63.51/LF	Covered/Uncovered Slips: \$1/LF/Night	Yes
Clinton Marina Lawrence, Kansas	388 Slips	10x20': 80; 10x24': 60 Rest: Mixed Jet Ski Ports: 8	Uncovered Slips: 10x20': \$1400; 12x24': \$1500; 14x24': \$1600; 14x28': \$1700; Covered Slips: 10x24': \$2500-2700; 12x28': \$3000-3200; 15x36': \$3800 Jet Ski Slip: \$800; Jet Ski Slip & Lift: \$1300	20 Courtesy Slips: \$25-35/Night \$110/Week \$325/Month	200 Covered Slips
Clinton Lake Marina Weldon, IL	226 Slips	(Estimate) Uncovered: 10x20': 2; 10x24': 24; 10x28': 2; 11x20': 22; 14x12': 22; 14x28': 2; 16x40': 24; Covered: 10x20': 56; 10x28': 20; 11x20': 8; 14x28': 6; 14x40': 10; 16x40': 14	Uncovered: 10x20': \$1155; 10x24': \$1260; 10x28': \$1496.25; 11x20': \$1155; 14x12': \$1050; 14x28': \$1496.25; 15.5x36': \$2625; 16x30': \$2625; 16x40': \$2625; 21x38': \$2625; T-Head: \$1050-2887.50; Covered: 10x20': \$1496.25; 11x20': \$1496.25; 12x28': \$2100; 14x20': \$1496.25; 14x28': \$2100; 14x40': \$2835; 16x40': \$3150	\$35/Day; \$65/2 Days \$90/3 Days; \$200/Week \$600/Month	Yes, 105, Mostly Smaller Slips, Free
Clinton Marina Clinton, IA Mississippi River			Covered: 20': \$500; 30': \$1350; 40': \$1950; 50': \$2950 Uncovered: 40': \$1650; 50': \$2450	\$30/Day + Elec. \$150/Week + Elec. 30 amp: \$5/Day 50 amp: \$20/Day	
Seneca Yacht Club's Hiddencove Marina, Illinois River			19' & Under: \$1030 (no power); 20-24': \$1080 (no power); 25': \$1255 (with power); each additional foot add \$40 up to 60' (\$2605)		

Shumway Marine Rochester, NY Genesee River	219 Slips	15-150'	\$73/FT; \$1250 for Small Slips	\$1.50/FT/Night (Going Up Next Year)	None
Sunset Bay Marina Trempealeau, WI Mississippi River	150 Slips			20' & Under: \$20/Night 21-24': \$25/Night 25-32': \$32.50/Night Over 32': \$1/FT/Night	
Island City Harbor Sabula, IA Mississippi River	150 Slips	20x14-16x60		\$15 (No Elec) \$30 (w/Elec)	None
Camanche Marina Camanche, IA Mississippi River	80-100 Slips	20', 25', 30', 40', 50', 60'	20' (No Water/Elec): \$550; 25' (No Water/Elec): \$730; 30' (No Water/Elec): \$870; 30' (With Water/Elec): \$970; 40' (With Water/Elec): \$1325; 50' (With Water/Elec): \$1890; 60' (With Water/Elec): \$2410	\$1/FT/Day	Yes
Muscatine Municipal Boat Harbor, Mississippi River	105 Slips	20': 87 40' Houseboat Slips: 18	Slips (no elec.) 17' & Under: \$338; 18-25': \$439; 26-32': \$539; Single Slips: \$635; Houseboats (with elec.) 32-40': \$991; 40' & Over: \$991 + \$5 for Each Foot Over 40'	\$1/FT/Night	None
Art Keller Marina Quincy, IL Mississippi River	274 Slips	Covered & Uncovered 8x18'-15x40'	Covered: \$2.75/SF Uncovered: \$2.45/SF	\$45/Night w/Electricity \$35/Night no Electricity	10-20 People (Mostly for 25-30')
Two Rivers Marina Rockport, IL Mississippi River	200+ Slips	Covered & Uncovered	Covered: 10x22': \$885; 12x24': \$1515; 14x28': \$1925; 14x36': \$2890; 15x40': \$3210; 15x44': \$3525; 16x44': \$3525; 16x48': \$3850; 16x54': \$4330; 20x60': \$4810; Uncovered: 10x22', 12x24', or 14x28': \$700; T-Heads: \$70/FT; Jet Ski: \$400; Hoist (in addition to cost of slip): 4000lb: \$455; 6000lb: \$695 8000lb: \$915; 10,000lb: \$1145	\$1.25/FT/Day (\$25 Minimum)	
Two Branch Marina St. Charles, MO Mississippi River			10x24': \$1300; 10x26': \$1300; 10x28': \$1400; 10x30': \$1500; 12x30': \$1550; 14x32': \$1800; 14x40': \$2250; 16x42': \$2400; 16x45': \$2600; Jet Ski: \$300		
Lake Center Marine St. Charles, MO Mississippi River		Covered & Uncovered	20': \$1575; 24': \$1975; 28': \$2790; 30': \$2985; 32': \$3210; 40': \$3810; 44': \$4075; 48': \$4415; Jet Ski: \$650 Uncovered w/Hoist, \$900 Covered w/Hoist		
Woodland Marina St. Charles, MO Mississippi River			Steel Docks: 24-65': \$72/FT Wood Docks: 26-60': \$68/FT		
Port Charles Harbor St. Charles, MO Mississippi River		All Covered Docks: 10x26': 23; 11x26': 7; 12x19': 1; 12x27': 2; 12x28': 12; 13x30': 7; 14x28': 6; 14x32': 6; 16x36': 3; 16x40': 3; 16x44': 3; 16x50': 11; 16x60': 10			
Grafton Harbor Grafton, IL Illinois River	180 Slips	128 Covered 52 Uncovered	Uncovered Slips: 14x26': \$2340; 14x30': \$2700; 14x40': \$3600 Covered Slips: 12x28': \$2625; 14x28': \$2625; 14x34': \$3213; 14x36': \$3402; 16x40': \$3780; 18x44': \$4158; 18x48': \$4536; 18x54': \$5103; 18x60': \$5670; PWC: Slip Holder: \$300; Non-Slip Holder: \$600	\$1.30/FT/Night (30' Minimum) Daytime Dockage: \$8/Slip	
Alton Marina Alton, IL Mississippi River			Uncovered: 25': \$1500; 30': \$2470; 35': \$3035; 40': \$3600; 45': \$4165; 50': \$4725; 55': \$5290; >55': \$96/FT Covered: 30': \$2810; 35': \$3435; 40': \$4050; 45': \$4675; 50': \$5290; 55': \$5850	\$1.30/FT/Night (30' Minimum)	
Anchor In Marina Seneca, IL Illinois River	175 Slips	20' 30' 40'			
Mariners' Village & Marina, Seneca, IL Illinois River	116 Slips	PWC			
Spring Brook Marina, Seneca, IL Illinois River	210 Slips		\$50/FT for All Docks		Yes
Heritage Harbor Ottawa, IL Illinois River	450 Slips (Under Construction)	35': 36 40': 94 60': 4	\$75/LF All Have Power/Water Except 9-35' Slips (\$40/LF) Jet Ski: \$500		None
Starved Rock Marina, Ottawa, IL Illinois River	200+ Slips	20-50'	20' (no Elec.): \$1015; 25' (w/30 amp): \$1400; 30' w/30 amp: \$1750; 40' (w/30amp): \$2035; 50' (w/Twin 30 amp): \$2385; 50' (w/Twin 30 amp) Single Slip: \$2525; Seasonable Live Aboard Above Standard Rate: \$445	\$1.25/FT/Night	None
National Marine Peoria Heights, IL Illinois River		20' 28' 30' 36'	20': \$1100; 28': \$1350 30': \$1425; 36': \$1675		
Detweiller Marina Peoria, IL Illinois River	180 Slips	20-30'	20 In-Water Beach Slips (No Water) 20 Dry Dock Spots w/Free Launch for Season		
EastPort Marina Peoria, IL Illinois River	280 Slips	25-50'	Economy Slip (Limited Power & Water): \$825 Standard Slip: up to 45' Jet Port (Out of Water)- \$595	Yes	

Marina	Slip Occupancy		Buoy Moorings	Dry Rack Storage	Storage On Site	Remote
	Seasonal	Transient				
Scales Pointe Marina Coralville Lake, IA	100%	Weekends Full	None	None	\$400/Season, \$15/FT Additional for Boats Over 24' Indoor Summer/Winter: \$40/FT for 6 Month Lease Summer May 1 to October 30: \$300; Storage w/out Dock Lease: \$1000/Winter; \$1500/Summer	None
Mid River Marine Coralville Lake, IA	100%	N/A	\$560-682/YR	Adding New Buidling for Dry Rack Storage	Indoor with In/Out: \$1905-2155/YR; Outdoor with In/Out (18'min): \$39.96-44.40/FT; Outdoor: \$450/YR; Trailer: \$100/YR; Community Building: \$57-70/FT/YR; Community with Storage (Including Winter Storage): \$2500/YR	None
Coralville Lake Marina Coralville Lake, IA					Trailer: \$100/Season	
Clear Lake Boats Marina Clear Lake, IA Private	100%	N/A	None	None	None	Yes, Can Hold About 1200 Boats
Oak Hill Marina Lake Okoboji, IA					<19': \$456-520; 20-22': \$550-594; 23-25': \$725-775; 26-27': \$837-891; 28-31': \$960-1020; >32': \$1254-1320; Jet Ski: \$200-240	
Parks Marina Inc Lake Okoboji						
Coulter's Panorama Marina Lake Panorama, IA	100%	N/A	None	None	Indoor Cold Storage	None
Saylorville Lake Marina Saylorville Lake, IA	98%	100% on Weekends	78 \$1475 for 30', \$21/FT Additional	Storage: Outdoor Summer: \$25/FT (\$500 Min) Indoor: \$50/FT	If Paid Before July 1st: Outside Winter: <32': \$351; 32-38': \$469; 39-44': \$530; 45-51': \$587; 52-58': \$644; >59': \$700 Inside Winter: Jet Ski: \$185; <22': \$577; 23-27': \$613; 28-30': \$659; 31-34': \$742; Trailer Storage: \$100	None
Rathbun Lake Marina Rathbun Lake, IA						
Southfork Marina Rathbun Lake, IA						
Red Rock Marina Lake Red Rock, IA			<29: \$690 30'+: \$850		Inside: 9x22': \$500; 9x26': \$540, 9x34': \$675 Outside: Up to 24': \$310; Up to 31': \$365; 32 and Up: \$400 Trailer Storage	
Frentress Lake Marine East Dubuque, IL	100%	100% on Weekends when Available	None	Yes	Summer & Winter Outdoor & Indoor Cold	None
Dubuque Yacht Basin Dubuque, IA	90%	20% Usually filled only on Holidays	None	None	Cold Indoor & Outdoor	None
Mid-Town Marina East Dubuque, IL	98%	Not a Whole Lot	None	None	Outdoor Winter Storage: \$1.15/SF Outdoor Summer: 20' & Under: \$250/Season (No slip, Use of Ramp)	None
Massey Marina Dubuque, IA	98%	Depends on the Weekend	None	None	Winter Storage of Houseboats: \$50/Winter	None
Sunset Marina Rock Island, IL Mississippi	63% (175 of 473)	Busy on Holidays & Most Weekends	None	None	Summer/Winter Outdoor Land: \$2/SF; Winter Outdoor on Trailer: 25' & Under: \$151.26, Over 25': \$210.24; Winter Inside: \$2.88/SF; Winter Uncovered Water: \$2/SF; Winter Covered Water: \$2.41/SF; Trailer: 16' & Under: \$68.75, 16-26': \$103.13, Over 26': \$137.52	None
Clinton Marina Lawrence, Kansas	96%	Busy on Holidays; Usually 3-4 During Week	None	Yes	Summer/Winter: Outdoor Dry Boat Storage \$50/Space	None
Clinton Lake Marina Weldon, IL	100% (Last 5 Years)	Holidays & Weekends Full	12 \$630	None	Indoor: \$22/LF (Includes Launch Fee) Dryland: \$375 (Includes Launch Fee)	60x100' Building (About 26 Boats)
Clinton Marina Clinton, IA					Inside Heated Inside Cold Outside	
Seneca Yacht Club's Hiddencove Marina, Illinois River					Indoor: \$25/FT Outside: \$400 for Members; \$500 Otherwise	
Shumway Marine Rochester, NY	100%	Holidays & Weekends Full if Available	None	None	Indoor Cold: \$53/FT; w/Trailer: \$26/FT Outdoor: \$34/FT; w/Trailer: \$15/FT	None
Genesee River Sunset Bay Marina Trempealeau, WI					Summer Trailer Storage: Free	
Mississippi River Island City Harbor Sabula, IA Mississippi River	85%	Depends on Weekend	None	None	Indoor Cold: \$490/SF Outdoor: \$26.25/LF	None

Camanche Marina Camanche, IA Mississippi River	95%	Not Busy	None	None	None	None
Muscatine Municipal Boat Harbor, Mississippi River	Houseboats: 80%, Small Boats: 50%	Depends on Weekend, Pretty Steady	None	None	None	None
Art Keller Marina Quincy, IL Mississippi River	73%	Slow	None	None	Trailer: \$60/Season	None
Two Rivers Marina Rockport, IL Mississippi River					Outdoor: Summer: \$7.50/FT/Month; Winter: \$4.25/FT/Month; Annual: \$70/FT/Month; Trailer Storage w/Slip Rental: \$100	
Two Branch Marina St. Charles, MO Mississippi River				Dry Rack: \$500/Year; \$60/Month (3 Month Minimum)		
Lake Center Marine St. Charles, MO Mississippi River			None	Dry Rack: >24': \$70/FT, 25- 29': \$75/FT; 30-34': \$80/FT	Outdoor: \$6/FT/Month; Trailer: \$150/Year; Covered Winter: \$550 (2 Buildings)	
Woodland Marina St. Charles, MO Mississippi River				Yearly Rate: <20': \$1440; 21-22': \$1670; 23-24': \$1800; 25-28': \$1920; 29- 32': \$2220; Over 32': \$2580	Summer Monthly: <20': \$140; 21-22': \$155; 23-24': \$170; 25- 28': \$180; 29-32': \$205; Over 32': \$235 Winter Monthly: <20': \$120; 21-22': \$135; 23-24': \$150; 25- 28': \$160; 29-32': \$185; Over 32': \$215 Trailer: \$20/Month	
Port Charles Harbor St. Charles, MO Mississippi River						
Grafton Harbor Grafton, IL Illinois River						
Alton Marina Alton, IL Mississippi River						
Anchor In Marina Seneca, IL Illinois River					2 Buildings 54x105' 60x420' Outdoor Storage	
Mariners' Village & Marina, Seneca, IL Illinois River						
Spring Brook Marina, Seneca, IL Illinois River			None		Outdoor Dry Dock: \$25/LF Inside Heated Dry Rack: \$8/SF + \$1000 NF Deposit; Inside Dry Rack: \$4.50/SF + \$500 NF Deposit	
Heritage Harbor Ottawa, IL Illinois River	100%		None	250 Indoor Dry Rack	Winter: Indoor & Outdoor	
Starved Rock Marina, Ottawa, IL Illinois River	80%	Holidays & Weekends	None	None	Indoor: Starting at \$695 Runabout up to 20' on Trailer: \$330; Runabouts Above 20': \$16.50/FT; Cruisers/Houseboats w/Lifts: \$27.50/FT	None
National Marine Peoria Heights, IL Illinois River					Inside & Outside	
Detweiller Marina Peoria, IL Illinois River						
EastPort Marina Peoria, IL Illinois River				Yes	Dry Stack, Dry Dock Inside & Outside	

Marina	Proximity to Cedar Rapids (Miles)
Scales Pointe Marina	15
Coralville Lake, IA Mid River Marine	15
Coralville Lake, IA Coralville Lake Marina	21
Coralville Lake, IA Clear Lake Boats Marina	117
Clear Lake, IA Private Oak Hill Marina	198
Lake Okoboji, IA Parks Marina Inc	198
Lake Okoboji Coulter's Panorama Marine Lake Panorama, IA	139
Saylorville Lake Marina Saylorville Lake, IA	105
Rathbun Lake Marina Rathbun Lake, IA	98
Southfork Marina Rathbun Lake, IA	105
Red Rock Marina Lake Red Rock, IA	79
Frentress Lake Marine East Dubuque, IL	64
Dubuque Yacht Basin Dubuque, IA	64
Mid-Town Marina East Dubuque, IL	63
Massey Marina Dubuque, IA	64
Sunset Marina Rock Island, IL Mississippi	67
Clinton Marina Lawrence, Kansas	286
Clinton Lake Marina Weldon, IL	197
Clinton Marina Clinton, IA Mississippi River	79
Seneca Yacht Club's Hiddencove Marina, Illinois River	167
Shumway Marine Rochester, NY Genesee River	722
Sunset Bay Marina Trempealeau, WI Mississippi River	138
Island City Harbor Sabula, IA Mississippi River	79
Camanche Marina Camanche, IA Mississippi River	76
Muscatine Municipal Boat Harbor Mississippi River	53
Art Keller Marina Quincy, IL Mississippi River	143
Two Rivers Marina Rockport, IL Mississippi River	179
Two Branch Marina St. Charles, MO Mississippi River	223

Lake Center Marine St. Charles, MO Mississippi River	223
Woodland Marina St. Charles, MO Mississippi River	222
Port Charles Harbor St. Charles, MO Mississippi River	221
Grafton Harbor Grafton, IL Illinois River	220
Alton Marina Alton, IL Mississippi River	230
Anchor In Marina Seneca, IL Illinois River	167
Mariners' Village & Marina Seneca, IL Illinois River	166
Spring Brook Marina Seneca, IL Illinois River	166
Heritage Harbor Ottawa, IL Illinois River	157
Starved Rock Marina Ottawa, IL Illinois River	150
National Marine Peoria Heights, IL Illinois River	141
Detweiller Marina Peoria, IL Illinois River	142
EastPort Marina Peoria, IL Illinois River	145

Marina	Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
Scales Pointe Marina Coralville Lake, IA	Good-Excellent Docks:2007-2008	3 \$5/Day \$125/YR	Car: 350 Trailer: 150	30 & 50 amp; Winter: \$3/day	Yes	Yes	Yes	House-boats Only	House-boats Only
Mid River Marine Coralville Lake, IA		2	Cars Trailers: Remote		Yes	Yes	Yes	None	Yes
Coralville Lake Marina Coralville Lake, IA							Yes		
Clear Lake Boats Marina Clear Lake, IA Private	Good	1	Cars: 150	110 Volt	None	None	Yes	None	None
Oak Hill Marina Lake Okoboji, IA									
Parks Marina Inc Lake Okoboji				Yes	Yes			Yes	
Coulter's Panorama Marine Lake Panorama, IA	New Slips	3	Cars & Trailers	30 amp	None	None	Yes	None	None
Saylorville Lake Marina Saylorville Lake, IA	Very Good	2, Free/Slip Holders; \$30/Day for Public	Cars & Trailers	Most Slips	Most Slips	Free DIY; \$150/ Season	Yes	None	None
Rathbun Lake Marina Rathbun Lake, IA				30 amp	Yes	Yes	Yes		
Southfork Marina Rathbun Lake, IA						Yes	Yes		
Red Rock Marina Lake Red Rock, IA				Basic: \$75 50 amp: \$300			\$15 \$150/ Season	Yes	
Frentress Lake Marine East Dubuque, IL	Good	1 Free/Slip Holders \$5/Public	Cars & Trailers	30 & 50 amp	Yes	Yes	Yes	Available	Available
Dubuque Yacht Basin Dubuque, IA	Excellent New Facilities & Docks	8 Free Public	Cars & Trailers	30 & 50 amp	Yes	Yes	Yes	Available	None
Mid-Town Marina East Dubuque, IL	Very Good; Inspected 2/Year	2 (Free) \$5/Launch for Public	Cars & Trailers	Most Slips; Duals 30's, Dual 50's	Most Slips	Yes	Yes	Houseboats & Large Covered Slips	None
Massey Marina Dubuque, IA	Good	2 Free	Cars & Trailers	30 amp-Larger Slips Only, Others \$200/Season; No Elec. At Smaller Slips	Large Slips Only	None	Yes	None	None
Sunset Marina Rock Island, IL Mississippi	Good	None	Cars	30 & 50 amp	Yes	Yes No Charge	Yes	None	None
Clinton Marina Lawrence, Kansas	Excellent New Facilities & Docks	4 Free	Cars & Trailers	Standard Outlets	Yes		Yes		
Clinton Lake Marina Weldon, IL	Some New Docks; Facilities Dated	\$5/Day \$50/Year	Cars: About 180 Trailers: 180-200	20 amp, 30 amp, twin 30's, 50 amp; Small Boats come with Elec; Others Metered	Most Slips	Yes No Charge	Yes	None	None
Clinton Marina Clinton, IA Mississippi River			Yes	30 & 50 amp	Yes	Yes	Yes		
Seneca Yacht Club's Hiddencove Marina, Illinois River		\$15/Day; Fee Included with Slip		30 & 50 amp; Twin 30's: \$2.50/FT	Yes		Yes	Yes	
Shumway Marine Rochester, NY Genesee River	Conc. Docks Very Good	1 \$15/ Launch \$150/ Season	Cars & Trailers	30 & 50 amp	Yes	Yes	Yes	None	None
Sunset Bay Marina Trempealeau, WI Mississippi River		2	Yes	Yes	Yes				
Island City Harbor Sabula, IA Mississippi River	Good	1 Free/Slip Holders	Cars & Trailers	30 & 50 amp	Yes	Yes	Yes	None	None
Camanche Marina Camanche, IA Mississippi River	OK	1 \$5/Launch \$50/Season	Cars & Trailers	30 amp (50 amp Available)	Yes	Yes	Yes	Available	Available
Muscatine Municipal Boat Harbor, Mississippi River	Trans. Docks Updated, Rest Need to be Replaced	4 Free	Cars: 330 Trailer: 53	\$30/Season \$10 Additional for A/C or Heater	Yes	\$5 Free with Fuel Purchase	Yes	None	None
Art Keller Marina Quincy, IL Mississippi River	Dated	None, (Across River)	Cars & Trailers	30 amp for Bigger Slips, 120v for All	Yes	Yes \$5	Yes	None	None
Two Rivers Marina Rockport, IL Mississippi River		1?		50 amp 240 volt	Yes			Yes	
Two Branch Marina St. Charles, MO Mississippi River				Yes	Yes				

Lake Center Marine St. Charles, MO Mississippi River Woodland Marina				Non-Metered: \$85; Metered: Billed Monthly	Yes	Yes	Yes		
St. Charles, MO Mississippi River Port Charles Harbor		Yes?		Yes	Yes		Yes		
St. Charles, MO Mississippi River Grafton Harbor						Yes	Yes		
Grafton, IL Illinois River Alton Marina				Yes	Yes	Yes	Yes	Yes	Yes
Alton, IL Mississippi River Anchor In Marina			300+			Yes	Yes	Yes	
Seneca, IL Illinois River Mariners' Village & Marina, Seneca, IL		Yes		Yes	Yes		Yes		
Illinois River Spring Brook Marina, Seneca, IL Illinois River		Yes		Yes	Yes			Yes	
Heritage Harbor Ottawa, IL Illinois River Starved Rock Marina, Ottawa, IL	New	2	Car & Trailer	Up to Double 50 amp	Yes	Yes	Yes	Yes	
Illinois River National Marine Peoria Heights, IL	Very Good	2 \$10/Launch	Car & Trailer, \$10 Overnight Parking Fee	30 & 50 amp	Yes	Free/Slips Holders, \$10/Pub.	Yes	None	None
Illinois River Detweiller Marina Peoria, IL		Yes		Metered 30 amp	Yes	Yes	Yes		
Illinois River EastPort Marina Peoria, IL Illinois River		3 \$5		30 amp	Yes		Yes		
				Yes	Yes	Yes	Yes		

Lake Center Marine St. Charles, MO Mississippi River	Lift (per FT): >24': \$2.50; 25-29': \$3.00; 30-34': \$3.50; 35-39': \$4.00; 40'+: \$4.50 Forklift (per FT): >24': \$1.75; 25-29': \$2.00; 30-34': \$3.00	Full Service?						
Woodland Marina St. Charles, MO Mississippi River	Yes			Yes			Yes	
Port Charles Harbor St. Charles, MO Mississippi River	Yes	Full Service		Yes	Yes		Yes	Yes
Grafton Harbor Grafton, IL Illinois River				Private Bathroom Suites			Yes	Yes
Alton Marina Alton, IL Mississippi River				Private Luxury	Yes		Yes	Yes
Anchor In Marina Seneca, IL Illinois River	Yes	Yes						
Mariners' Village & Marina, Seneca, IL Illinois River				Yes	Yes	Yes		
Spring Brook Marina, Seneca, IL Illinois River		Yes		Yes				
Heritage Harbor Ottawa, IL Illinois River	Yes	None	None	New	None	Yes	Yes	Yes
Starved Rock Marina, Ottawa, IL Illinois River	² Up to 25 Tons	Full Service	None; Adjacent Business	Good	None	None	Yes	Yes
National Marine Peoria Heights, IL Illinois River		Full Service		Updated			Yes	
Detweiller Marina Peoria, IL Illinois River				Yes				
EastPort Marina Peoria, IL Illinois River				Pool, Hot Tub, Private Restrooms & Showers: \$425/Season	Yes			

Scales Pointe Marina

Coralville Lake, IA

Scales Pointe Marina is one of three marinas in Coralville Lake. Its seasonal occupancy is 100% with 30 people on a waiting list. The facility condition is good-excellent, has on-site winter storage, and has designated houseboat slips with 30 and 50 amp shore power.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
135 TOT	8x20 to 23x90 About 25 Houseboat Slips	Wood Pontoon Docks: \$850/Year; Concrete Pontoon Dock: \$1350/Year; Covered Concrete Docks: 10'x26': \$2000/Year; 12'x34': \$2300/Year; Houseboat Docks: >40':\$60-70/FT; <40':\$50/FT (for additional feet over 40'); Jet Ski Slips: \$650/Year	100%	Weekends Full	About 30 People	None	None	\$400/Season, \$15/FT Additional for Boats Over 24'; Indoor Summer/ Winter: \$40/FT for 6 Month Lease; Summer May 1 to October 30: \$300; Storage w/out Dock Lease: \$1000/Winter; \$1500/Summer

Proximity

Proximity to Cedar Rapids

15 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
Good- Excellent	3 \$5/Day \$125/YR	Cars: 350 Trailers: 150	30 & 50 amp	Yes	Yes	Yes	House- boats Only	House-boats Only

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
Yes, \$100/HR	Full Service	None	Good	None	None	Yes	Yes



Mid River Marine

Coralville Lake, IA

Mid River Marine is one of three marinas in Coralville Lake. With 200 slips, the seasonal occupancy is 100% with no waiting list. Mid River also has designated houseboat and pontoon slips. In addition to having on-site indoor/outdoor winter storage, there are current plans for adding a building for dry rack storage.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
200 TOT	20': 80 30': 12 50': 8 90': 2	Pontoon Slip: \$700/YR Runabout Slip: \$909-1027/YR Houseboat Docks: >42' with Electricity: \$51.50-58/FT/YR <42' with Cruiser & Electricity: \$49.84-54/FT/YR Jet Ski Port: \$451-532/YR	100%	N/A	None, but Always Full	\$560-682/YR	Adding New Building for Dry Rack	Indoor with In/Out: \$1905-2155/YR; Outdoor with In/Out: \$39.96-44.40/FT; Outdoor: \$450/YR; Trailer: \$100/YR; Community Building: \$57-70/FT/YR; Community with Storage (Including Winter Storage): \$2500/YR

Proximity

Proximity to Cedar Rapids

15 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
	2	Cars Trailers: Remote		Yes	Yes	Yes	None	Yes

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
None	Full Service	None	Restroom Only	None	None	None	Yes



Coralville Lake Marina

Coralville Lake, IA

Coralville Lake Marina is one of three marinas studied within a 21 miles radius of Ellis Harbor. They provide covered and uncovered slips, with options for lifts. There are also designated houseboat and pontoon slips.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
		Uncovered Runabout/Pontoon Slip: \$995; Covered Slips in Water: <20': \$1050; 21-23': \$1095; 10' Wide: \$1950; 12" Wide: \$1950; Covered Hoist: <20': \$1620; 21-23': \$1835; 24-28' Old Dock: \$2195; 24-30'; New Dock: \$2295; Houseboat Docks: \$1895; Jet Ski Port: \$500						Trailer: \$100/Season

Proximity

Proximity to Cedar Rapids

21 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
						Yes		

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
	Full Service	Pontoon					



Clear Lake Boats Marina

Clear Lake, IA

Clear Lake Boats Marina has about 80 slips with all sizes being 24 feet. They have an occupancy of 100% with 20 people on a waiting list. The facility is in good condition, and has boat and personal watercraft rentals.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage	
			Seasonal	Transient				On Site	Remote
80+ TOT	All 24'	\$2000/YR	100%	N/A	About 20 People	None	None	None	Can Hold About 1200 Boats

Proximity

Proximity to Cedar Rapids

117 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
Good	1	Cars: 150	110 Volt	None	None	Yes	None	None

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
None	Full Service	Boat & PWC	Restroom Only	None	None	Yes	Yes



Oak Hill Marina

Lake Okoboji, IA

Oak Hill Marina is located on Lake Okoboji. They provide hoist and personal watercraft rentals, as well on-site winter storage.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
		Hoist Rentals: <21': \$2450-2950; 22-24': \$2850-3350; 25-30': \$3050-3550; PWC: \$625-925						<19': \$456-520; 20-22': \$550-594; 23-25': \$725-775; 26-27': \$837-891; 28-31': \$960-1020; >32': \$1254-1320; Jet Ski: \$200-240

Proximity

Proximity to Cedar Rapids

198 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi



Parks Marina Inc

Lake Okoboji, IA

Parks Marina Inc is located on East Okoboji Lake. They provide covered and uncovered slips with water and shore power.

Availability Factors

Slips	Slip Size Covered & Uncovered	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				

Proximity

Proximity to Cedar Rapids

198 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
			Yes	Yes			Yes	

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
			Yes	Yes	Yes	Yes	Yes



Coulter's Panorama Marina

Lake Panorama, IA

Coulter's Panorama Marina has a total of 103 slips. All slips are covered 10x24. Their seasonal occupancy is 100% with 16 people on a waiting list. Coulter's has new slips providing 30 amp power, and has on-site winter storage available. Public bathrooms are expected within the next two years.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
103 TOT	All 10x24 Covered	\$1500/YR	100%	N/A	16 People	None	None	Indoor Cold Storage

Proximity

Proximity to Cedar Rapids

139 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
New Slips	3	Cars & Trailers	30 amp	None	None	Yes	None	None

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
None	Full Service	None	Getting Bathrooms in 2 Years	None	None	Yes	None



Saylorville Lake Marina

Saylorville Lake, IA

Saylorville Lake Marina has a total of 394 covered and uncovered slips. Their occupancy is 98% with a waiting list mostly for buoy moorings. The facility is currently in very good condition with shore power and water available at most slips. On-site winter storage is available, as well as boat and bike rentals. A floating restaurant/bar and banquet facility is also on the premises.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
394 TOT	Covered & Uncovered 24-60' Mostly 24-28'	Covered: 12x24': \$2369; 12x28': \$2672; 14x32': \$3525; Uncovered: 10x24': \$1823(no elec); 12x24': \$1823(no elec); 12x28': \$2054(no elec); 12x28': \$2279; 14x30': \$3046; 14x32': \$3046 Jet Ski: \$700	98%	100% on Weekends	Yes, Mostly for Buoy Moorings	78 \$1475 for 30', \$21/FT Additional	\$25/FT (\$500 Min) Indoor: \$50/FT	If Paid Before July 1st: Outdoor Winter: <32': \$351; 32-38': \$469; 39-44': \$530; 45-51': \$587; 52-58': \$644; >59': \$700 Inside Winter: Jet Ski: \$185; <22': \$577; 23-27': \$613; 28-30': \$659; 31-34': \$742; Trailer Storage: \$100

Proximity

Proximity to Cedar Rapids

105 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
Very Good	2, \$30/Day; Free for Slip Holders	Cars & Trailers	Most Slips	Most Slips	\$150/Season; Free DIY	Yes	None	None

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
Yes, \$2.15/FT	Full Service	Boat & Bike	Very Good	None	None	Yes	Yes \$31.80/Season



Rathbun Lake Marina

Rathbun Lake, IA

Rathbun Lake Marina has 360 covered and uncovered slips on the Rathbun Lake, with slips providing water and 30 amp power. There is a restaurant located on site. This marina is managed along with the Southfork Marina.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
360 TOT	Covered: 24-60' Uncovered: 22-70'	Average: \$70/LF			Yes			

Proximity

Proximity to Cedar Rapids

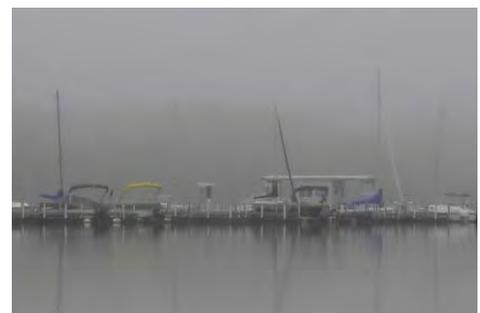
98 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
			30 amp	Yes	Yes	Yes		

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
	Full Service	Boats				Yes	Yes



Southfork Marina

Rathbun Lake, IA

Southfork Marina has covered and uncovered slips on the Rathbun Lake. A campground is also located on site. This marina is managed along with the Southfork Marina.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
	Covered: 20' & 22' Uncovered: 30-50'	Average \$70/LF						

Proximity

Proximity to Cedar Rapids

105 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
					Yes	Yes		

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
		Boat & Kayak				Yes	



Red Rock Marina

Lake Red Rock, IA

Red Rock Marina is located in Lake Red Rock. There is a total of 130 covered and uncovered slips with basic and 50 amp power available, as well as buoy moorings. This marina has updated restrooms, on-site winter storage, and a restaurant.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
130 TOT	Covered: 50	Uncovered: 12x24': \$1590; 13x32': \$2100; 14x40': \$2800; 23x70': \$4200 Covered: 12x24': \$1740; 13x32': \$2240				<29: \$690 30'+: \$850		Inside: 9x22': \$500; 9x26': \$540, 9x34': \$675 Outside: Up to 24': \$310; Up to 31': \$365; 32 and Up: \$400 Trailer Storage

Proximity

Proximity to Cedar Rapids

79 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
			Basic: \$75 50 amp: \$300		\$15 \$150/ Season	Yes		

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
\$/Season: 4500 lbs: \$725 6500 lbs: \$950 10,000 lbs: \$1135		Pontoon	Updated Restrooms			Yes	



Frestress Lake Marine

East Dubuque, IL

Frestress Lake Marine is located in East Dubuque, Illinois. There are 340 covered and uncovered slips with 30 and 50 amp shore power and water. The facility is in good condition with the seasonal occupancy at 100% and a wait list of about 100 people. Dry rack and on-site winter storage is available.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
340 TOT	Covered & Uncovered 8x20'-17x60' (Smaller Slips Include Elec., Larger Slips are Metered)	\$630-3000	100%	100% on Weekends when Available	About 100 People	None	Yes	Summer & Winter Outdoor & Indoor Cold

Proximity

Proximity to Cedar Rapids

64 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
Good	1 \$5 Free for Slip Holders	Cars & Trailers	30 & 50 amp	Yes	Yes	Yes	Available	Available

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
Yes \$7/FT<18' \$8/FT>18'	Full Service	None	Good	Yes	None	Yes	None



Dubuque Yacht Basin

East Dubuque, IL

Located in East Dubuque, IL, Dubuque Yacht Basin provides 256 covered and uncovered slips with 30 and 50 amp power and water. The seasonal occupancy is 90% with about 20 people on a waiting list. The facility condition is excellent, with new facilities and docks. On-site winter storage is available, as well pontoon and yacht rentals. Other amenities include a shuttle service and restaurant with live music on weekends.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
256 TOT	Covered & Uncovered 26-50'	\$1195-4600	90%	20% Usually Filled Only on Holidays	20 People	None	None	Cold Indoor & Outdoor

Proximity

Proximity to Cedar Rapids

64 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
Excellent New Facilities & Docks	8 Free for Public	Cars & Trailers	30 & 50 amp	Yes	Yes	Yes	Available	None

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
Yes	Full Service	Pontoon Yacht for Cruises & Events	Excellent	Yes	Yes	Yes	Yes



Mid-Town Marina

East Dubuque, IL

Mid-Town Marina is a marina/campground that has 250 covered and uncovered slips, with most slips providing water and dual 30 and dual 50 power. With 98% seasonal occupancy, there are about 100 people on the waiting list. The facility is inspected twice a year by the Army Corps and is in very good condition. On-site winter storage is also available. Note: When speaking with this marina, they mentioned a lot of people selling there cruisers for pontoon boats.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
250 TOT	18-65'	Uncovered: 9x20': \$485-510; 10x20': \$545; 11x24': \$615-900; 14x36': \$1400; 16x40': \$1590; 16x50': \$1995; 18x40': \$1650; Covered: 8x18': \$750; 9x20': \$840; 9x21': \$850; 9.5x20': \$950; 9.5x24': \$1010; 11x24': \$1250; 11x28': \$1500; 12x28': \$1525; 14x30': \$1650; 15x36': \$1735; 15x40': \$2125; 17x50': \$3250; 17x60': \$3950; Jet Ski Lifts: \$420	98%	Not a lot	About 100 People	None	None	Outdoor Winter Storage: \$1.15/SF Outdoor Summer: 20' & Under: \$250/Season (No slip, Use of Ramp)

Proximity

Proximity to Cedar Rapids

63 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
Very Good, Inspected 2/Year	2 \$5/Launch Free for Slip Holders	Cars & Trailers	Most Slips; Dual 30's, Dual 50's	Most Slips	Yes	Yes	House-boats & Large Covered Slips	None

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
Yes	Full Service	None	Yes	Yes	None	Yes	Yes



Massey Marina

Dubuque, IA

Massey Marina is a marina/campground that has about 100 covered and uncovered slips with 30 amp power and water available at larger slips. With 98% seasonal occupancy, there are about 100 people on the waiting list with covered slips high in demand. The facility is managed by the Army Corps and is in good condition. On-site winter storage is available.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
About 100	30': 5 33': 5 36': 7 10X20': 83 12 Houseboat Slips	Uncovered Houseboat 30', 33', 36': \$2000; Covered 10x20' (No Elec/H2O): \$550; Uncovered (No Elec/H2O): \$360-420	98%	Depends on the Weekend	About 100 People; Covered Slips High in Demand	None	None	Winter Storage of Houseboats: \$50/Winter

Proximity

Proximity to Cedar Rapids

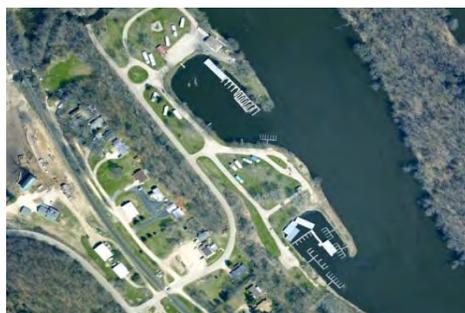
64 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
Good	2 Free	Cars & Trailers	30 amp- Large Slips Only, Others \$200/ Season	Large Slips Only	None	Yes	None	None

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
None	None	None	Good	None	None	Yes, Very Limited	None



Sunset Marina

Rock Island, IL

Sunset Marina, located in Rock Island, IL, has a total of 473 covered and uncovered slips. With the seasonal occupancy at 63%, there is a waiting list for some slips. This marina is in good condition and is leased out by the Army Corps. Sunset Marina is part of the Dubuque County Conservation Park. On-site winter storage is available.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
473 TOT	Uncovered: 16': 8; 20': 111; 22': 16; 25': 75; 26': 24; 28': 3; 30': 2; 36': 34; 42': 47; 50': 10; 60': 1; (Covered Not Shown)	Uncovered No Power: \$29.91/LF Uncovered With Meter: \$46.90-49.04/LF; Uncovered With Elect.: \$44.77-46.90/LF; Covered With Meter: \$60.75-63.51/LF; Covered With Electricity: \$60.75-63.51/LF	63%	Busy on & Most Weekends	Yes	None	None	Summer/Winter Outdoor Land: \$2/SF; Winter Outdoor on Trailer: 25'<: \$151.26, 25'>: \$210.24; Winter Inside: \$2.88/SF; Winter Uncovered Water: \$2/SF; Winter Covered Water: \$2.41/SF; Trailer: 16'<: \$68.75, 16-26': \$103.13, 26'>: \$137.52

Proximity

Proximity to Cedar Rapids

67 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
Good	None	Cars	30 & 50 amp	Yes	Yes Free	Yes	None	None

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
Yes	None	None	Good	None	None	None	Yes



Clinton Lake Marina

Weldon, IL

Clinton Lake Marina, located in Weldon, IL, has a total of 226 covered and uncovered slips and 12 buoy moorings. The seasonal occupancy has been 100% for the last five years. There is a waiting list of 105 people, with most waiting for smaller slips. Although the docks are new, the facilities are rather dated. 20, 30, 50, and twin 30 amp shore power is provided. Smaller slips include power, while others are metered. Most slips provide water. On-site winter storage is available. The lake is a cooling reservoir for a power plant and this marina is owned by the county. The marina gives a portion of the slip rent to the county.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
226 TOT	(Estimate) Uncovered: 10x20': 2; 10x24':24; 10x28': 2; 11x20': 22; 14x12': 22; 14x28': 2; 16x40': 24 (Covered Not Shown)	Uncovered: 10x20': \$1155; 10x24': \$1260; 10x28':\$1496.25; 11x20': \$1155; 14x12': \$1050; 14x28': \$1496.25; 15.5x36': \$2625; 16x30': \$2625; 16x40': \$2625; 21x38': \$2625; T-Head: \$1050-2887.50; Covered: 10x20': \$1496.25; 11x20': \$1496.25; 12x28': \$2100; 14x20': \$1496.25; 14x28': \$2100; 14x40': \$2835; 16x40': \$3150	100% (Last 5 Years)	Holidays & Weekends Full	105 People; Mostly Smaller Slips	12 \$630	None	Indoor: \$22/LF (Includes Launch Fee) Dryland: \$375 (Includes Launch Fee)

Proximity

Proximity to Cedar Rapids

197 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
Some New Docks; Facilities Dated	\$5/Day \$50/Year	Cars: About 180 Trailers: 180-200	20, 30 & 50 amp, twin 30s, Small Slips Incl. Elec, others Metered	Most Slips	Yes, No Charge	Yes	None	None

Services & Amenities

Lift/Haul Service	Boat Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
None	Most Repairs	Yes	Dated	Yes, Free	Yes	Yes	Yes



Clinton Marina

Clinton, IA

Clinton Marina, located in Clinton, IA along the Mississippi, has covered and uncovered slips. 30 and 50 power is available, as well as on-site winter storage.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
		Covered: 20': \$500; 30': \$1350; 40': \$1950; 50': \$2950 Uncovered: 40': \$1650; 50': \$2450						Inside Heated Inside Cold Outside

Proximity

Proximity to Cedar Rapids

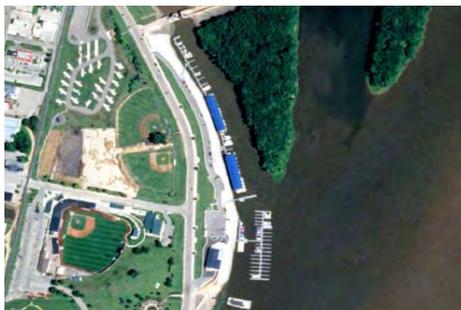
79 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
		Yes	30 & 50 amp	Yes	Yes	Yes		

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
	Full Service		Yes	Yes		Yes	



Seneca Yacht Club's Hiddencove Marina

Seneca, IL

Seneca Yacht Club's Hiddencove Marina is located in Seneca, IL. 30 and 50 amp power is available for 25' slips. Twin 30's is available for \$2.50/FT extra. This marina has on-site winter storage available.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
		19' & Under: \$1030 (no power); 20-24': \$1080 (no power); 25': \$1255 (with power); each additional foot add \$40 up to 60' (\$2605)						Indoor: \$25/FT Outside: \$400 for Members; \$500 Otherwise

Proximity

Proximity to Cedar Rapids

167 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
	\$15/Day Free for Slip Holders		30 & 50 amp; Twin 30's: \$2.50/FT	Yes		Yes	Yes	

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
	Yes		Yes		Yes		



Harborside Marina

Wilmington, IL

Harborside Marina is located in Wilmington, IL on the Illinois River. They offer full service repairs.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				

Proximity

Proximity to Cedar Rapids

183 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
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Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
Full Service							



Sunset Bay Marina

Trempealeau, W

Sunset Bay Marina, located in Trempealeau, WI, has a total of 150 slips providing both water and shore power.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage
			Seasonal	Transient				On Site
150 TOT								Summer Trailer Storage: Free

Proximity

Proximity to Cedar Rapids

138 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
	2	Yes	Yes	Yes				

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
	Full Service		Yes	Yes			Yes



Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				

Proximity

Proximity to Cedar Rapids

120 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
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Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
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Island City Harbor

Sabula, IA

Island City Harbor is located in Sabula, IA. This marina has 150 slips with water and 30 and 50 amp shore power. With seasonal occupancy at about 85%, there is currently no waiting list. The facility is in good condition and on-site winter storage is available.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
150 TOT	20x14' - 16x60'		85%	Depends on the Weekend	None	None	None	Indoor Cold: \$4.90/SF Outdoor: \$26.25/LF

Proximity

Proximity to Cedar Rapids

79 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
Good	1 Free for Slip Holders	Cars & Trailers	30 & 50 amp	Yes	Yes	Yes	None	None

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
Yes	Full Service	Yes	Good	Yes	None	Yes	Yes



Camanche Marina

Camanche, IA

The Camanche Marina, located along the Mississippi River in Camanche, IA, has a total of 80-100 slips. The seasonal occupancy is 95% with a waiting list. Water and 30 amp power (50 amp available) is provided at some slips. The facility is in okay condition. No on-site storage is available.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
80-100 TOT	20', 25', 30', 40', 50', 60'	20' (No Water/Elec): \$550; 25' (No Water/Elec): \$730; 30' (No Water/Elec): \$870; 30' (With Water/Elec): \$970; 40' (With Water/Elec): \$1325; 50' (With Water/Elec): \$1890; 60' (With Water/Elec): \$2410	95%	Not Busy	Yes	None	None	None

Proximity

Proximity to Cedar Rapids

76 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
Okay	1 \$5/Launch \$50/Season	Cars & Trailers	30 amp (50 amp Available)	Yes	Yes	Yes	Available	Available

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
None	Non	None	Restroom Only; Okay Condition	None	None	Very Limited	None



Muscatine Municipal Boat Harbor

Muscatine, IA

Muscatine Municipal Boat Harbor has 105 slips, with some slips designated for houseboats. Shore power is available for houseboat slips only. The seasonal occupancy for houseboats is 80%, and small boats have an occupancy of 50%. The transient docks have been updated, but the restrooms are dated. There is no on-site winter storage.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
105 TOT	20': 87; 40' Houseboats Slips: 18	Slips (no elec.) 17' & Under: \$338; 18-25': \$439; 26-32': \$539; Single Slips: \$635; Houseboats (with elec.) 32-40': \$991; 40' & Over: \$991 + \$5 for Each Foot Over 40'	Houseboats: 80% Small Boats: 50%	Depends on the Weekend	None	None	None	None

Proximity

Proximity to Cedar Rapids

53 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
Trans. Docks Updated, Restrooms Dated	4 Free	Cars: 330 Trailer: 53	\$30/Season \$10 Additional for A/C or Heater	Yes	\$5 Free w/ Fuel Purchase	Yes	None	None

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
None	None, Across Street	None	Restroom Only; Dated	None	None	None	None



Art Keller Marina

Quincy, IL

Art Keller Marina has a total of 274 covered and uncovered slips. With a seasonal occupancy of 73%, there is a waiting list of 10-20 people waiting for a 25-30' slip. 120v power is available for all slips, with 30 amp available for the larger slips. The current facility condition is dated.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
274 TOT	Covered & Uncovered 8x18' - 15x40'	Covered: \$2.75/SF Uncovered: \$2.45/SF	73%	Slow	10-20 People (Mostly for 25-30' Slip)	None	None	Trailer: \$60/Season

Proximity

Proximity to Cedar Rapids

143 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
Dated	None, Across River	Cars & Trailers	30 amp for Bigger Slips, 120v for All	Yes	\$5	Yes	None	None

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
None	None	None	Dated	None	None	None	None



Two Rivers Marina

Rockport, IL

Two Rivers Marina, located on the Mississippi River in Rockport, IL, had over 200 covered and uncovered slips providing water and 50 amp shore power. On-site winter storage is available.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
200+ TOT	Covered & Uncovered	Covered: 10x22': \$885; 12x24': \$1515; 14x28': \$1925; 14x36': \$2890; 15x40': \$3210; 15x44': \$3525; 16x44': \$3525; 16x48': \$3850; 16x54': \$4330; 20x60': \$4810; Uncovered: 10x22', 12x24', or 14x28': \$700; T-Heads: \$70/FT; Jet Ski: \$400; Hoist (in addition to cost of slip): 4000lb: \$455; 6000lb: \$695; 8000lb: \$915; 10,000lb: \$1145						Outdoor: Summer: \$7.50/FT/Month; Winter: \$4.25/FT/Month; Annual: \$70/FT/Month; Trailer Storage w/Slip Rental: \$100

Proximity

Proximity to Cedar Rapids

179 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
			50 amp, 240v	Yes			Yes	

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
		Yes	Yes	Yes			



Two Branch Marina

St. Charles, MO

Two Branch Marina is located in St. Charles, MO along the Missouri River. Slips are provided with water and shore power. Dry rack storage is available.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
		10x24': \$1300; 10x26': \$1300; 10x28': \$1400; 10x30': \$1500; 12x30': \$1550; 14x32': \$1800; 14x40': \$2250; 16x42': \$2400; 16x45': \$2600; Jet Ski: \$300					Dry Rack: \$500/ Year; \$60/ Month (3 Month Minimum)	

Proximity

Proximity to Cedar Rapids

223 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
			Yes	Yes				

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
\$600							



Lake Center Marine

St. Charles, MC

Lake Center Marina, located on the Missouri River in St. Charles, MO, has covered and uncovered slips. Shore power is provided non-metered for \$85, or metered and billed monthly. Dry rack and on-site winter storage is available.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
Covered & Uncovered	20': \$1575; 24': \$1975; 28': \$2790; 30': \$2985; 32': \$3210; 40': \$3810; 44': \$4075; 48': \$4415; Jet Ski: \$650 Uncovered w/Hoist, \$900 Covered w/Hoist					None	Dry Rack: >24': \$70/FT, 25-29': \$75/FT; 30-34': \$80/FT	Outdoor: \$6/FT/Month; Trailer: \$150/Year; Covered Winter: \$550 (2 Buildings)

Proximity

Proximity to Cedar Rapids

223 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
			Non-Metered: \$85; Metered-Billed Monthly	Yes	Yes	Yes		

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
(per FT): >24': \$2.50; 25-29': \$3.00; 30-34': \$3.50; 35-39': \$4.00; 40'+: \$4.50							



Woodland Marina

St. Charles, MC

Located in St. Charles, MO along the Missouri River is Woodland Marina. There are two pricing options depending on the type of dock: steel or wood. Dry rack and on-site winter storage is available.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
		Steel Docks: 24-65': \$72/FT Wood Docks: 26-60': \$68/FT					<20': \$1440; 21-22': \$1670; 23-24': \$1800; 25-28': \$1920; 29-32': \$2220; Over 32': \$2580	Summer Monthly: <20': \$140; 21-22': \$155; 23-24': \$170; 25-28': \$205; Over 32': \$235 Winter Monthly: <20': \$120; 21-22': \$135; 23-24': \$150; 25-28': \$160; 29-32': \$185; Over 32': \$215 Trailer: \$20/Month

Proximity

Proximity to Cedar Rapids

222 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
			Yes	Yes		Yes		

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
Yes			Yes			Yes	



Port Charles Harbor

St. Charles, MO

Port Charles Harbor in St. Charles, MO has all covered docks. Full service repairs are provided.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
	All Covered: 10x26': 23; 11x26': 7; 12x19': 1; 12x27': 2; 12x28': 12; 13x30': 7; 14x28': 6; 14x32': 6; 16x36': 3; 16x40': 3; 16x44': 3; 16x50': 11; 16x60': 10							

Proximity

Proximity to Cedar Rapids

221 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
					Yes	Yes		

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
Yes	Full Service		Yes	Yes		Yes	Yes



Grafton Harbor

Grafton, IL

Grafton Harbor is located along the Mississippi River in Grafton, IL. It has a total of 180 covered and uncovered slips providing water and shore power. This marina offers private bathroom suites.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
180 TOT	Covered: 128 Uncovered: 52	Uncovered Slips: 14x26': \$2340; 14x30': \$2700; 14x40': \$3600 Covered Slips: 12x28': \$2625; 14x28': \$2625; 14x34': \$3213; 14x36': \$3402; 16x40': \$3780; 18x44': \$4158; 18x48': \$4536; 18x54': \$5103; 18x60': \$5670; PWC: Slip Holder: \$300; Non-Slip Holder: \$600						

Proximity

Proximity to Cedar Rapids

220 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
			Yes	Yes	Yes	Yes	Yes	Yes

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
			Private Bathroom Suites			Yes	Yes



Alton Marina

Alton, IL

Alton Marina, located on the Mississippi River in Alton, IL, provides covered and uncovered slips, as well as private luxury bathrooms.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
		Uncovered: 25': \$1500; 30': \$2470; 35': \$3035; 40': \$3600; 45': \$4165; 50': \$4725; 55': \$5290; >55': \$96/FT						
		Covered: 30': \$2810; 35': \$3435; 40': \$4050; 45': \$4675; 50': \$5290; 55': \$5850						

Proximity

Proximity to Cedar Rapids

230 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
		300+			Yes	Yes	Yes	

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
			Private Luxury Bathroom	Yes		Yes	Yes



Anchor In Marina

Seneca, IL

Anchor In Marina is located on the Illinois River in Seneca, IL. It has a total of 175 slips providing water and shore power. On-site winter storage is also available.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
175 TOT	20' 30' 40'							2 Buildings 54x105' 60x420' Outdoor Storage

Proximity

Proximity to Cedar Rapids

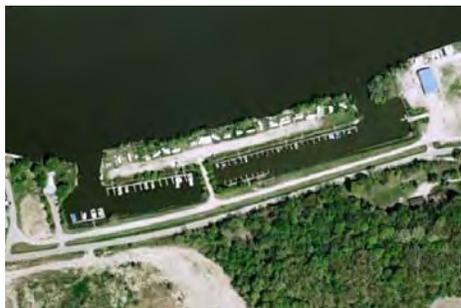
167 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
	Yes		Yes	Yes		Yes		

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
Yes	Yes						



Mariner's Village & Marina

Seneca, IL

Mariner's Village & Marina, located in Seneca, IL along the Illinois River, has a total of 116 slips providing water and shore power.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
116 Slips	PWC							

Proximity

Proximity to Cedar Rapids

166 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
	Yes		Yes	Yes		Yes		

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
			Yes	Yes	Yes		



Spring Brook Marina

Seneca, IL

Spring Brook Marina is located in Seneca, IL on the Illinois River. There are a total of 210 slips providing water and shore power. On-site winter storage is available. There is a waiting list for this marina.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
210 TOT		\$50/FT for All Docks			Yes	None		Outdoor Dry Dock: \$25/LF Inside Heated Dry Rack: \$8/SF + \$1000 NF Deposit; Inside Dry Rack: \$4.50/SF + \$500 NF Deposit

Proximity

Proximity to Cedar Rapids

166 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
			Yes	Yes			Yes	

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
	Yes		Yes				



Heritage Harbor

Ottawa, IL

Heritage Harbor is a newer marina located in Ottawa, IL just off the Illinois River. When completed, there will be a total of 450 slips providing water and up to double 50 amp shore power. The current seasonal occupancy is 100% with no waiting list. Dry rack and on-site winter storage is available.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
450 TOT	35': 36	\$75/LF	100%		None	None	250 Indoor Dry Rack	Indoor & Outdoor
Under Construction	40': 94 60': 4	All Have Power/Water Except 9-35' Slips (\$40/LF) Jet Ski: \$500						

Proximity

Proximity to Cedar Rapids

157 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
New	2	Cars & Trailers	Up to Double 50 amp	Yes	Yes	Yes	Yes	

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
Yes	None	None	New	None	Yes	Yes	Yes



Starved Rock Marina

Ottawa, IL

Located in Ottawa, IL along the Illinois River is Starved Rock Marina. With over 200 slips providing water and 30 and 50 amp shore power, this marina has a seasonal occupancy of 80% with no waiting list. The facility condition is very good. On-site winter storage is available.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
200+ TOT	20-50'	20' (no Elec.): \$1015; 25' (w/30 amp): \$1400; 30' w/30 amp: \$1750; 40' (w/30amp): \$2035; 50' (w/Twin 30 amp): \$2385; 50' (w/Twin 30 amp) Single Slip: \$2525; Seasonable Live Aboard Above Standard Rate: \$445	80%	Holidays & Weekends	None	None		Indoor: Starting at \$695 Runabout up to 20' on Trailer: \$330; Runabouts Above 20': \$16.50/FT; Cruisers/Houseboats w/Lifts: \$27.50/FT

Proximity

Proximity to Cedar Rapids

150 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
Very Good	2 \$10/Launch	Cars & Trailers \$10 Overnight Parking Fee	30 & 50 amp	Yes	\$10 Free for Slips Holders	Yes	None	None

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
2 Up to 25 Tons	Full Service	None; Adjacent Business	Good	None	None	Yes	Yes



National Marine

Peoria Heights, IL

National Marine in Peoria Height, IL is located in the Upper Peoria Lake. This marina provides water and metered 30 amp shore power. The restrooms are updated. National Marine provides on-site indoor and outdoor winter storage.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
	20'	20': \$1100; 28': \$1350						Indoor & Outdoor
	28'	30': \$1425; 36': \$1675						
	30'							
	36'							

Proximity

Proximity to Cedar Rapids

141 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
	Yes		Metered 30 amp	Yes	Yes	Yes		

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
	Full Service		Updated			Yes	



Detweiller Marina

Peoria, IL

Located in Peoria, IL on the Peoria Lake is Detweiller Marina. This marina has a total of 180 slips providing water and 30 amp shore power.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
180 TOT	20-30' 20 In-Water Beach Slips (No Water) 20 Dry Dock Spots w/Free Launch for Season							

Proximity

Proximity to Cedar Rapids

142 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
	3 \$5		30 amp	Yes		Yes		

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
			Yes				



EastPort Marina

Peoria, IL

EastPort Marina, located in Peoria, IL on the Peoria Lake, has a total of 280 slips with some slips providing water and shore power. Use of the private restrooms, showers, pool and hot tub are \$425/season. Dry rack and on-site winter storage is available.

Availability Factors

Slips	Slip Size	Rate	Occupancy		Waiting List	Buoy Moorings	Dry Rack Storage	Winter Storage On Site
			Seasonal	Transient				
280 TOT	25-50'	Economy Slip (Limited Power & Water): \$825 Standard Slip: up to 45' Jet Port (Out of Water)- \$595					Yes	Indoor & Outdoor

Proximity

Proximity to Cedar Rapids

145 Miles

Marina Infrastructure Elements

Facility Condition	Boat Launch	Parking	Shore Power	Water	Pump Out	Fuel	Cable	Phone
			Yes	Yes	Yes	Yes		

Services & Amenities

Lift/Haul Service	Repairs	Boat Rentals	Shower/ Restroom	Laundry	Boater Lounge	Ship's Store	Wifi
			Pool, Hot Tub, Private Restrooms & Showers: \$425/Season	Yes			



















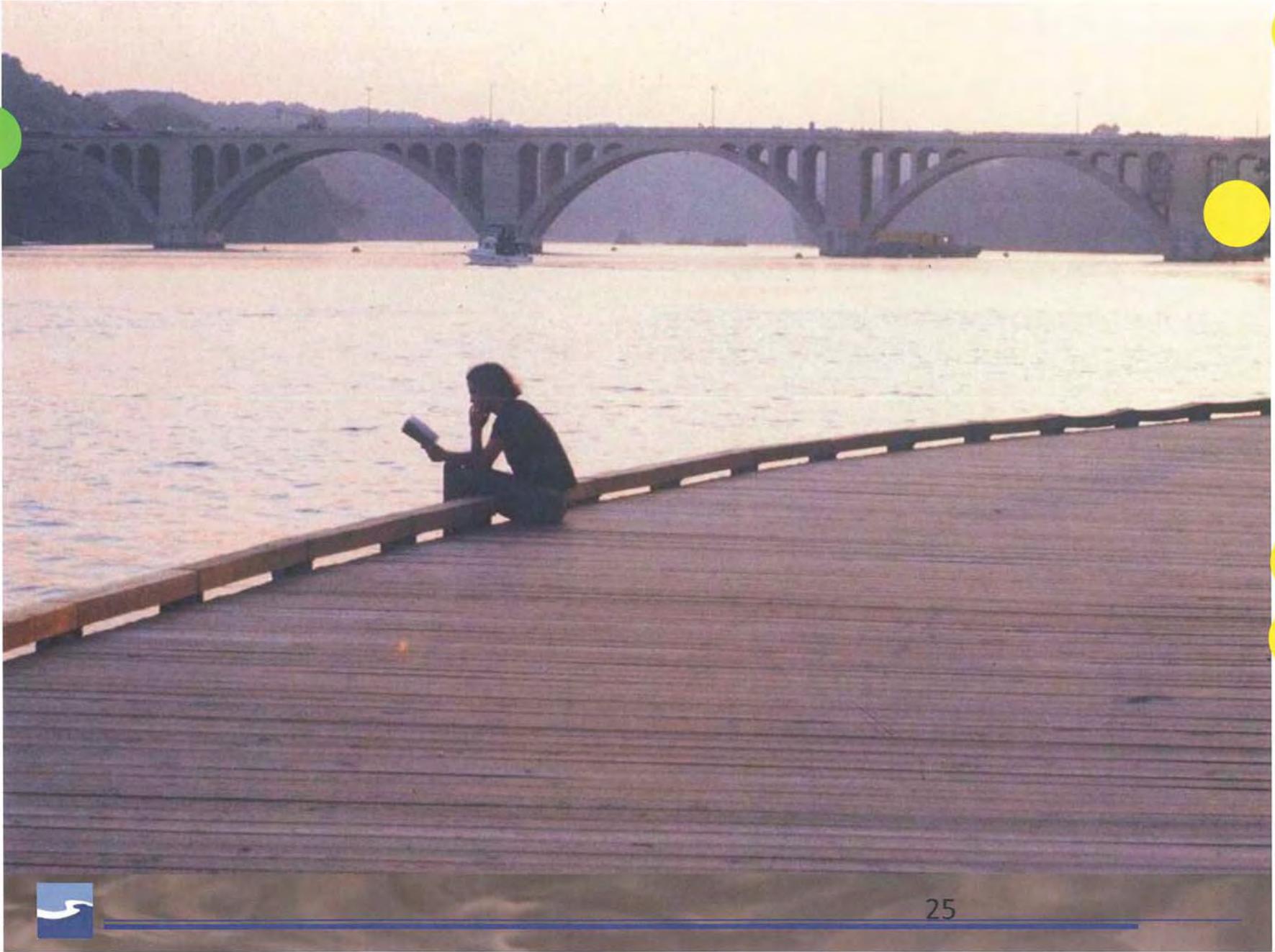




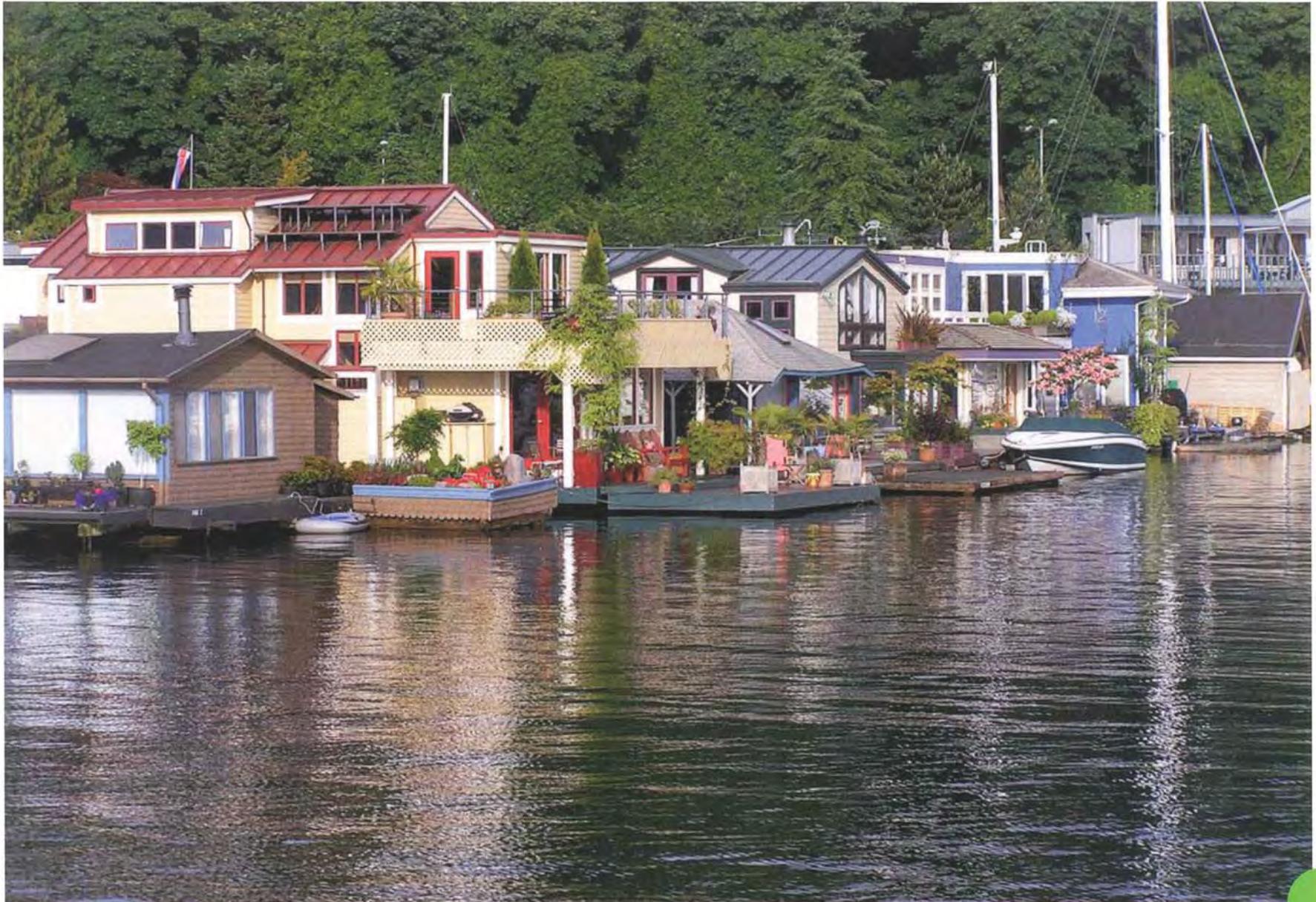


















Portland, OR





















Seattle, WA





Seattle, WA

