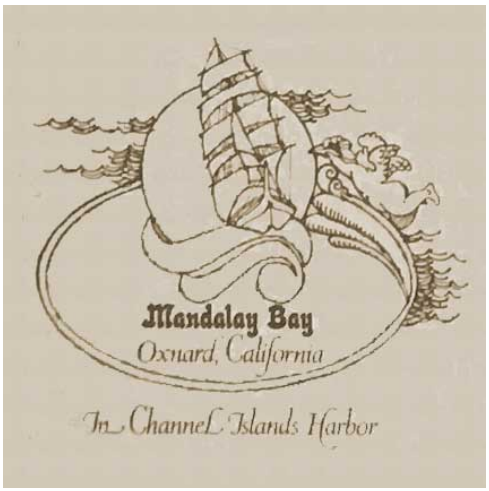


Channel Islands
Waterfront Homeowners Association
REPRESENTING MANDALAY BAY HOMEOWNERS

Initial construction of single family homes and townhouses in Mandalay Bay took place between 1968 and 1973. The project consists of 743 single family homes and 37 parcels designated as parks. The homes are protected from the water by reinforced concrete seawalls.

Mandalay Bay during construction

There are two types of seawalls: the “Boise” wall in the eastern part of the development and the “Zurn” wall in the western portion. Peninsula road separates the two different walls. Together the seawalls are more than 7 miles long.

The Boise system consists of restrained precast concrete panels held in place by precast concrete “T” shaped pilasters, which are anchored to a cast-in-place concrete footing. The footing is supported by a single row of battered timber piles spaced at 7.5 feet on center. Horizontal steel tie-rods connect the pilasters to a continuous cast-in-place concrete dead-man 21 feet behind the dry side of the wall. The pilasters and tie-rods are spaced at approximately 11 feet on center. The wall panels are approximately 10 feet tall and 8 inches thick. There are two 2 inch diameter weep holes per panel located 2 feet above the top of the 3 foot wide and 2 foot deep footing.

The Zurn wall is a cast-in-place concrete cantilevered retaining wall supported on a continuous cast-in place concrete footing. The footing is supported by a row of vertical timber piles and a row of battered timber piles. The vertical piles are spaced at 6 feet on center and the battered piles at 12 feet on center. The wall stems are 9 feet tall and range in thickness from 7 inches at the top to 12 inches at the bottom. The footings are 6 feet wide and 2 feet deep. Some of the walls have an 8 inch thick by 3foot deep cutoff wall and riprap slope protection on the water side to mitigate undermining problems. The top of the footings are approximately one foot below mean sea level. The maximum tidal range in Mandalay Bay is between 5 feet above mean sea level to 3 feet below mean sea level. The toe of the footings is often exposed at low tide.

Construction of the Mandalay Bay seawalls began around 1968 with the Boise wall system on the eastern side of the community. The Boise walls were constructed up to the eastern side of Peninsula Road when a new developer took over. The new developer continued construction using the Zurn wall system and completed the seawalls by 1973. Repairs have been made to the walls and yearly maintenance has taken place beginning in 1972.

Emergency repair to six Zurn wall foundation piles on Jamestown Way took place in August on 1992. Phase I Seawall Repairs began in February on 1993 and included pilaster repairs to 94 Boise lots. These repairs

included casting a new concrete face around the existing pilasters, repairing cracks and spalls, and repairing foundations. Phase II Seawall Repairs began in December of 1995 and included foundation and pile repairs to nine Boise wall locations and nine Zurn wall locations. In February of 1998, a number of emergency seawall repairs occurred. In December of 1999, cutoff wall repairs took place at nine locations and slope protection repairs were conducted at four locations. In December on 2000, a total of 159 repairs occurred, including cutoff wall repairs, slope protection repairs, and weep hole repairs. In December of 2001, a total of 111 repairs took place, including cutoff wall repairs, slope protection repairs, weep hole repairs, and crack repairs. In December of 2002, 108 repairs were completed, including cutoff wall repairs, pilaster repairs, backfill repairs, slope protection repairs, and crack repairs. In April of 2003, 24 more repairs took place, including pilaster repairs, guardrail repairs, and backfill repairs.

Typical repairs to the seawall foundations were the installation of polyvinyl sheet pile cutoff walls sealed with concrete, Fabriform slope protection, and riprap with geotechnical fabric slope protection. Typical pilaster repairs included forming and pouring a new cast-in-place concrete face around the existing pilasters. Sink holes were repaired by excavating to uncover the extent of the hole and filling with grout or gravel. Weep holes were repaired with filter point inserts and pilaster gaps were repaired with urethane grout. Cracks and joints were sealed with a urethane grout.

Where Has All The Maintenance Money Gone?

Oct 4, 2014 | Maintenance, Seawall Update |

This appears to be a most frequently asked question and possibly a most frequently misunderstood subject in the Mandalay Bay area.

Update October 9, 2014: Just got the final cost for the foundation & slope protection repairs, $152,423.41, down for the estimated $210,000. (saving: $57,576.59) Big thanks to the City of Oxnard and Harbor OffShore and the residents at the locations the work was done for the project coming in under budget! We have had numerous reports about how hard the Harbor Offshore people worked on this and the excellent quality of the work they did on this very important project to extend the life of the Seawalls! Thanks to TranSystems for identifying the need, defining the work and monitoring. Thanks to the City of Oxnard for scheduling, monitoring and keeping us in the loop, and thanks to the residents for being responsive to requests for waivers and extending work hours.

Mandalay Bay Seawall Projects 2003 to present

YEAR	Project	Cost
2005	Channel Dredging	$1,160,120
2005	Guardrail Replacement Phase 1	$221,145
2006	Guardrail Replacement Phase 2	$122,950
2013	Slope Protection (estimate: **$210,000**)	**$152,423.41** (actual)
2014	Kingsbridge Way (bid awarded – work to begin 2015)	$993,965
	SUBTOTAL	$265,0531.41
YEAR	TranSystems Projects	Cost
3/2001 to 11/2012	Seawall Assessment Phase A&B	$642,568
2/8/11-present	Agreement -7385 On Call Marine engineering Services	Cost to date

Task 1&1A: $33,381 2013 Environmental Permitting	$24,827
Task 2&2A: $28,500 2013 Environmental Permitting	$20,375
Task 3: $78,900 Kingsbridge Way Stabilization Design	$63,668
Task 4: $28,500 -Seawall Monitoring Program	$2046
TranSystems Cost subtotal to date	110,916
Total ALL Activities	$2,761,447.41

The numbers above reflect the *new numbers* for slope protection work completed in 2014.

NOTE: It is important to understand that the above numbers do NOT include the additional areas of expenditures from the Waterways Assessment funds like Landscaping & maintenance cost which are not insignificant. **The costs for Landscaping & Maintenance for Fiscal year 2013-2014 = $169,316.**

Total assessment revenue $450,000 minus Landscaping & Maintenance $169,316 = **$280,684 left for Seawall Repairs and maintenance**.
NOTE: The assessment referenced here is a round number of the total "waterways" fees collected on property tax bills to homeowners.

Landscaping & Maintenance

MBay_Landscaping_Costs-9-10-14
Planed and approved his year:
~~May 18th~~ Oldham Circle Park: $1325.00
~~May 8th~~ 25,800.00
UPDATE: this has been placed on hold due to the water shortage. Young and newly planted trees are at greatest risk.

Links to supporting documents and more information regarding the projects:

- See: 2013_Assessment_Item_pdf_685_KB-1
- MBay Project 2003 TO 2014 – Budgets FY13-14 & FY14-15
- MBay History 1968 to 2003
- Strategic_Investigation_PhaseB
- City_Council_Agreement_Copy of_report
- Additional related documents

Looking Back on Looking Forward

Presented in 2006

It was understood that the following repairs were needed

Dredging

- 31,000 yards of material

- Mean Low Tide level- 8 feet

Total Cost- $ 1.5 million

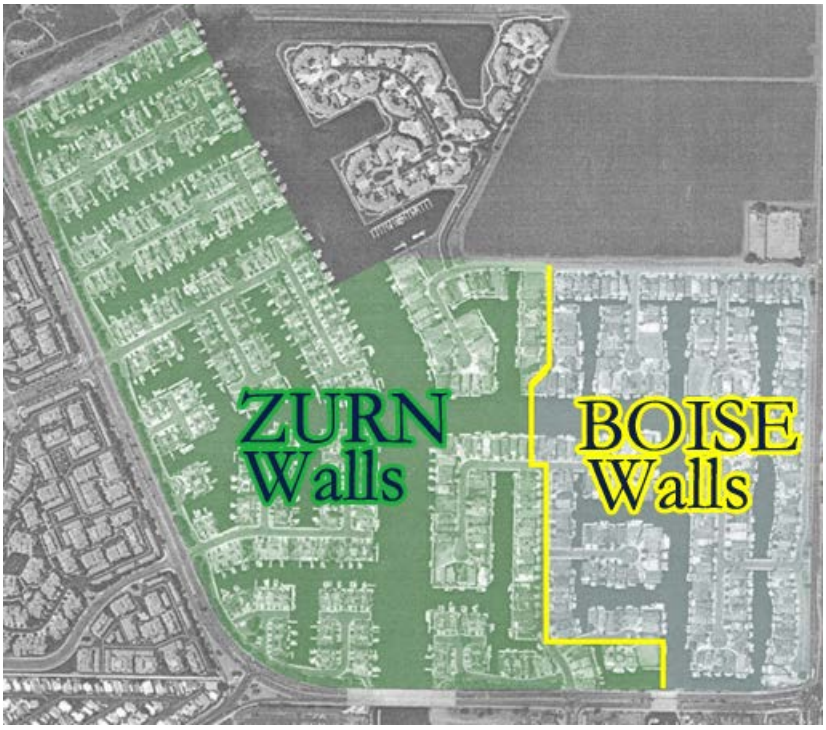
- Spot dredging of high spots
- Future dredging of East side of the bay

Replacement of Guardrails

"Mandalay Guardrail Replacement-Phase III 9/10/08 see the bids:

http://finance.cityofoxnard.org/Uploads/Purchasing/BidResults%20PW08-20-%20Opened%209-10-08.pdf

Seawall Repairs Facts (PRESENTED in 2006)



- 7.8 miles of seawall
  - 3.4 miles Boise Wall
  - 4.4 miles Zurn Wall
  - Estimated replacement cost of $56,000,000 or 41,185 feet of seawall at $1,359.72 per foot (2006 estimates)
  - 3.4 miles of channels
  - Mandalay Bay 743 properties

Seawall Repairs Completed as of 2006

- Nobel Consultants, Inc. (Marine engineering consultant)
- Harbor Offshore, Inc. (Maintenance contractor)

What has been completed (as of Feb 2006)- severe foundation repair items, the most severe pilaster problems, a large number of the backfill leak problems, a small number of crack and joint repairs

Last 10 years- $6.2 million dollars

Total assessment revenue $450,000 per year (x10) = $4,500,000 = **in the red -$1,500,000**

Projected Repairs Over Next 15 years (presented at HOA meeting in 2006)

- Reinforce Remaining Pilasters
- Repair Wall Panel Cracks And Seal Wall Joints
- Repair Weep Holes
- Maintain Slope To Protect Foundation
- Fill In Sink Holes

Seawall Repairs Funding: (presented at HOA meeting in 2006)

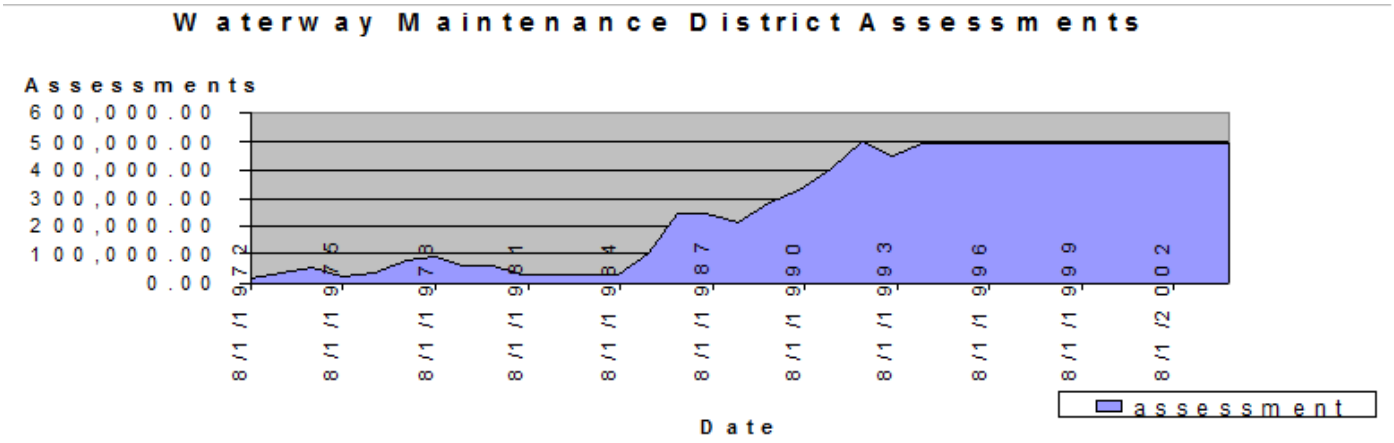
- Estimated cost-$13,248,000 over next 15 years (based on 2006 estimates)

o UPDATE 2014: the estimated costs in 2006 may have nothing to do with the actual costs. SEE Current Bid on Kingsbridge Way: $993,965.00
http://finance.cityofoxnard.org/Uploads/Purchasing/Bid%20Results%20PW14-03R-Opened-07-23-14.pdf

- Options- (presented at HOA meeting in 2006)

o Obtain a bond to cover entire cost in today's dollars

o Increase the current assessment and pay for the repairs over time



Assessment Information (presented at HOA meeting in 2006)

- Current assessment unchanged since 1993
- Total assessment revenue $450,000 per year
- Covers seawall repair, channel maintenance, landscaping
- **At the current assessment- $250,000 available for seawall repairs- Without inflation, 53 years to complete repairs**

Increase Current Assessment (presented by City of Oxnard at HOA meeting in 2006)

- Current Assessment range $453 to $1,586 (Average $ 593)
- Triple the assessment to $ 1,359 to $ 4,758 (Average $ 1,779 (Average increase $ 1,186))
- Total Revenue- $ 1,350,000 (Increase of $ 900,000 per year)
- ($900,000+$250,000) X 12 years = $ 13,800,000
- Inflation

Comparisons (presented at HOA meeting in 2006)

Annual Waterway Assessments proposed in 2006

- Westport- Condo $ 2,150 Detached Home $ 7,572
- Seabridge- Waterfront Home $ 8,524
- **Mandalay Bay Proposed Assessment- $ 1,780** PROPOSED IN 2006 !!!
- Earthquake Insurance (CEA)- $ 500,000 with 15% deductible- $ 2,200
- Landslide Insurance (Lloyds) for Seawall Failure

2015 –the current assessment will not cover the known expenses of maintaining our seawalls!

The channels need dredging again!

In 2005 the cost for Channel Dredging was $1,160,120

We have high priority projects that have been planned – the plans submitted approved and permitted and placed on hold.

THIS RFP flies in the face of plans that have been underway for YEARS!

Mandalay Bay Seawall Repair Feasibility Study and Construction Documentation for 3900-3966 West Hemlock Street Bid Close Date: 11/06/18 on or before 2:00 PM PT.

The City of Oxnard Public Works Department is also soliciting professional engineering services to provide a feasibility study of steel sheet pile design and structural engineering services for the repair of existing Boise type seawalls in the location of addresses 3900 – 3966 West Hemlock Street within the City of Oxnard using steel sheet piles. The contract will consist of the following phases:
Phase 1 – Feasibility Study of Steel Sheet Pile Design

Phase 2 – Construction Documentation for 3900-3966 West Hemlock Street While working with NBS we did request that the funding for projects be broken into believable workable projects.

The City of Oxnard is in the planning stage for the construction of 370 linear feet of an anchored steel sheet pile system along the existing seawall at the West Hemlock Street properties (3900-3966). The project proposal should include the assessment of drilled-hole passive soil anchors, and the incidental work needed to remove, store and replace portions of the nine dock platforms that are presently fixed to the existing seawall. The proposed wall is to be designed to be installed immediately in front of the existing wall and account for the existing 30' battered timber piles spaced at 7.5' on center along the seawall. The existing concrete panel seawall and tieback system are to remain in place

Feasibility – neither the Army Corps of Engineers nor the Coastal Commission are likely to approve.

I can respect the intention of looking for more cost-effective solutions but to waste time on a design that has been reviewed and dismissed is wasteful.

This type of plan eliminates the ability to address most needed repairs first as the entire project must be accomplished from start to finish wall 1 section at time with continuity. – Where do you start? How long will that take and who will fund a one fix – fixes all seawall replacement?

The seawalls in Long Beach Naples were constructed in a very different way by driving concrete sheet piles into the ground with NO FOOTINGS – this allowed the sheeting to be placed close to the existing concrete.

The seawall footings in Mandalay would require the sheets be set 3 to 5 feet into the channel away from the walls leaving many channels non navigable by existing vessels. Neither the Army Corp of engineers nor the coastal commission are likely to approve a more invasive and destructive plan that the one they already approved for an R&D Project to address Hemlock and the Pilaster replacement project which is very cost effective and would be more so IF WE HAD A BUDGET!

The estimated costs for the seawalls are rising way faster than sea levels

Expedited Repairs – (program ASAP) **2015 report**	IN PROGRESS AWARDED	NEEDED	short of funding
Expedited Repairs – (program ASAP)			
Fill 190 LF of cutoff wall gaps with sand & grout		$30,000.00	
Stabilization of 150 LF of seawall along Kingsbridge Way	$993,965.00		
Repair West Hemlock "Boise Repair Pilot Program		$1,550,000.00	
Repair an estimated (50) class 4 and class 5 Boise Pilasters		$290,000.00	
Provide 101 LF of slope protection at 5 undermined location	$210,000.00		
2016 Maintenance Dredging		$1,660,000.00	
IMMEDIATE NEED		**$3,530,000.00**	**$3,530,000.00**
Funded	$1,203,965.00		
High Priority Repairs - (program to start in 2 years)			
Repair 4800 LF of Class 4 Zurn walls		$9,300,000.00	
Provide slope repairs 232 LF at 7 locations high undermining potential		$406,000.00	
Repair (120) pilasters rated class 3.5		$675,000.00	
Repair 204 LF Class 4 Boise Seawall Segment		$494,000.00	
Repair the (23) isolated Class 4 Boise Panels		$669,000.00	
Repair the 773 LF of Class 4 Zurn walls in Track 2		$1,498,000.00	
Needed by 2017		**$13,042,000.00**	**$13,042,000.00**
Medium Priority Repairs (program to start in 5 years)			
Repair the 2073 LF of Class 3.5 Zurn walls in Track 1		$4,016,000.00	
Repair the 2891 LF of Class 3.5 Boise Seawall Segments		$5,601,000.00	
Repair the 832 LF of Class 3.5 Zurn walls in Track 2		$1,613,000.00	
Repair the (259) Class 3 Pilasters		$1,376,000.00	
Repair 182 LF of seawalls foundations steep slope		$318,500.00	
needed by 2020		**$12,924,500.00**	**$12,924,500.00**
Low Priority Repairs (program to start in 10 years)			
2026 Maintenance Dredging		$1,660,000.00	

Repair 5,600 LF of Class 3 Zurn walls in Track 1, 2 & 3		10,850,000	
Repair the 4900 LF of Class 3 Boise Seawall Segments		9,494,000	
Repair (207) Class 2.5 Pilasters		1,100,000	
Install slope protection to 1179 LF of seawall with substandard slope		1,375,000	
2036 Maintenance Dredging		$1,660,000.00	
needed by 2025		**$26,139,000.00**	**$26,139,000.00**
Required estimated funding			**$55,635,500.00**

By 2018 the numbers increased dramatically

- TransSystems has prepared a 25 year timeline of work for the entire community. This involves grouping city blocks of repair work into contract sizes which allow the work to be performed efficiently and matched to the available funding.

- **Program Value**

Annex A **$128,000,000** asset replacement cost vs.
Annex B **$192,000,000** replacement on emergency basis vs.
Annex C **$90,000,000** program repair cost to extend life 25-40 years.

- Purpose is to eliminate unanticipated wall failures and lengthen the lifespan of the seawalls

It is one thing to defer maintenance on a disaster in the making; it is altogether more egregious to ignore it.

Thank you for your time!

Sincerely
Debbie Mitchell
Seawall Team
Channel Islands Waterfront Homeowners Association
http://channelislandsca.com/

Channel Islands
Waterfront Homeowners Association
REPRESENTING MANDALAY BAY HOMEOWNERS