Water Quality and Seawall Update

The reason I am combining these two issues for this update is because there is inadequate funding for either and the City appears to be depleting funds faster than they are working on addressing issues and continuing maintenance that there is funding for.

FALL 2018: WATER QUALITY

. Total contract is for $306,045. But below is a diagram that is easier to illustrate. The city is still waiting to split up Zone 1 and Zone 2 so that is why it is coming from Fund 121, but it is identified as Zone 2 so we can ensure it is calculated when determining the final fund balance for each zone.

District	Account Number	Percentage Split	Amount
Waterways Zone 1	121-1606-805-8209	**55%**	$153,200
Waterways Zone 2	121-1606-805-8209	9%	$25,069
Seabridge CFD 4	173-1606-805-8209	23%	$64,065
Westport CFD 2	175-1606-805-8209	13%	$36,211
			$278,545
General Fund	101-1606-805-8209	N/A	$27,500
	TOTAL		**$306,045**

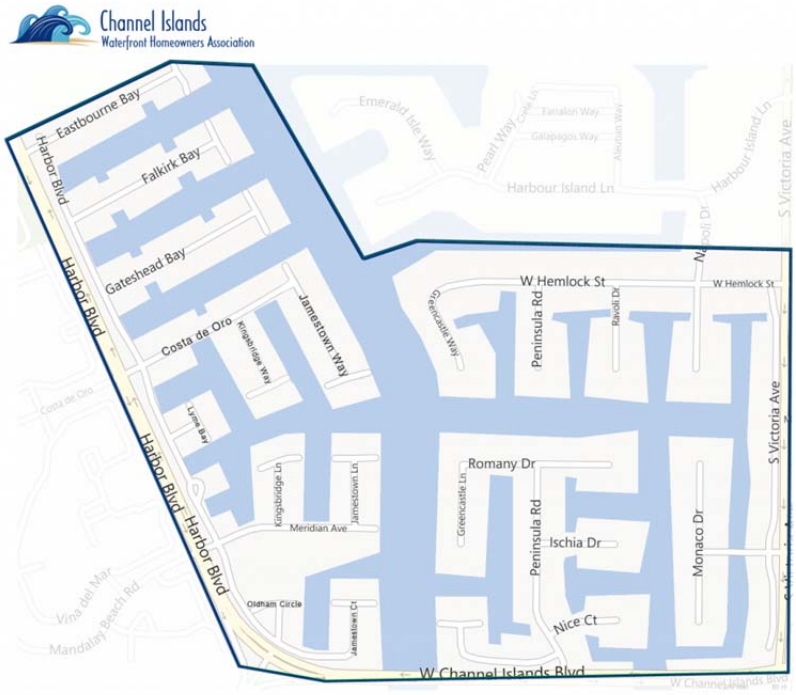
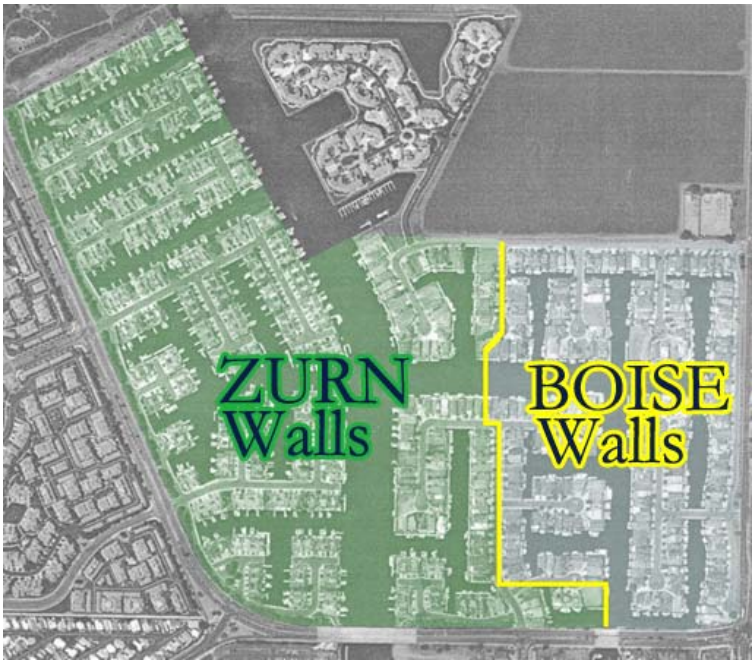


Figure 1: ZONE 1

MOST MARINE ENGINEERING PROJECTS FROM 2016 ARE AT A STANDSTILL
http://channelislandsca.com/october-2016-seawall-projects-status-update/

A little background
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.



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. (more details here:)

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

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.

Phase I Seawall Repairs
August 1992: Emergency repair to six Zurn wall foundation piles on Jamestown
February 1993 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

December of 1995 and included foundation and pile repairs to nine Boise wall locations and nine Zurn wall locations.

February of 1998, a number of emergency seawall repairs occurred.
December of 1999, cutoff wall repairs took place at nine locations and slope protection repairs were conducted at four locations.
December on 2000, a total of 159 repairs occurred, including cutoff wall repairs, slope protection repairs, and weep hole repairs.
December of 2001, a total of 111 repairs took place, including cutoff wall repairs, slope protection repairs, weep hole repairs, and crack repairs.
December of 2002, 108 repairs were completed, including cutoff wall repairs, pilaster repairs, backfill repairs, slope protection repairs, and crack repairs.

April of 2003, 24 more repairs took place, including pilaster repairs, guardrail repairs, and backfill repairs

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 PHASE B:	$642,568

2/8/11-2014	Agreement -7385 On Call Marine engineering Services	Cost
	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 **2003 to 2014**	$2,761,447.41

Presented in 2006 to Homeowners by the City of Oxnard

Seawall Repairs Facts

- 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
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

2006 Projected Repairs Over Next 15 years
(City presentation 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:
(City presentation at HOA meeting in 2006)
Estimated cost-$13,248,000 over next 15 years (based on 2006 estimates)

- Options- (presented at HOA meeting in 2006)
    - Obtain a bond to cover entire cost in today's dollars

Recommendation to Increase Current Assessment
(City presentation at HOA meeting in 2006)

- 2006 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