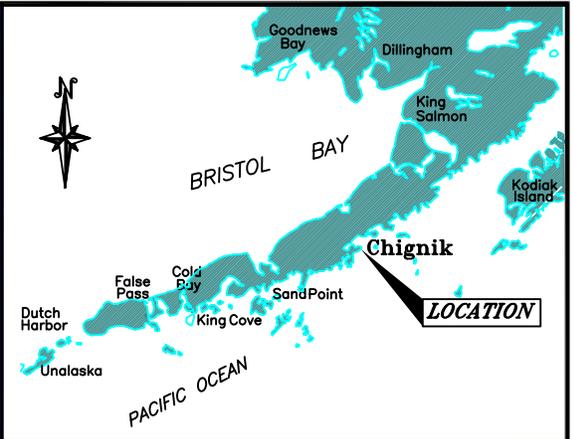


ANCHORAGE BAY

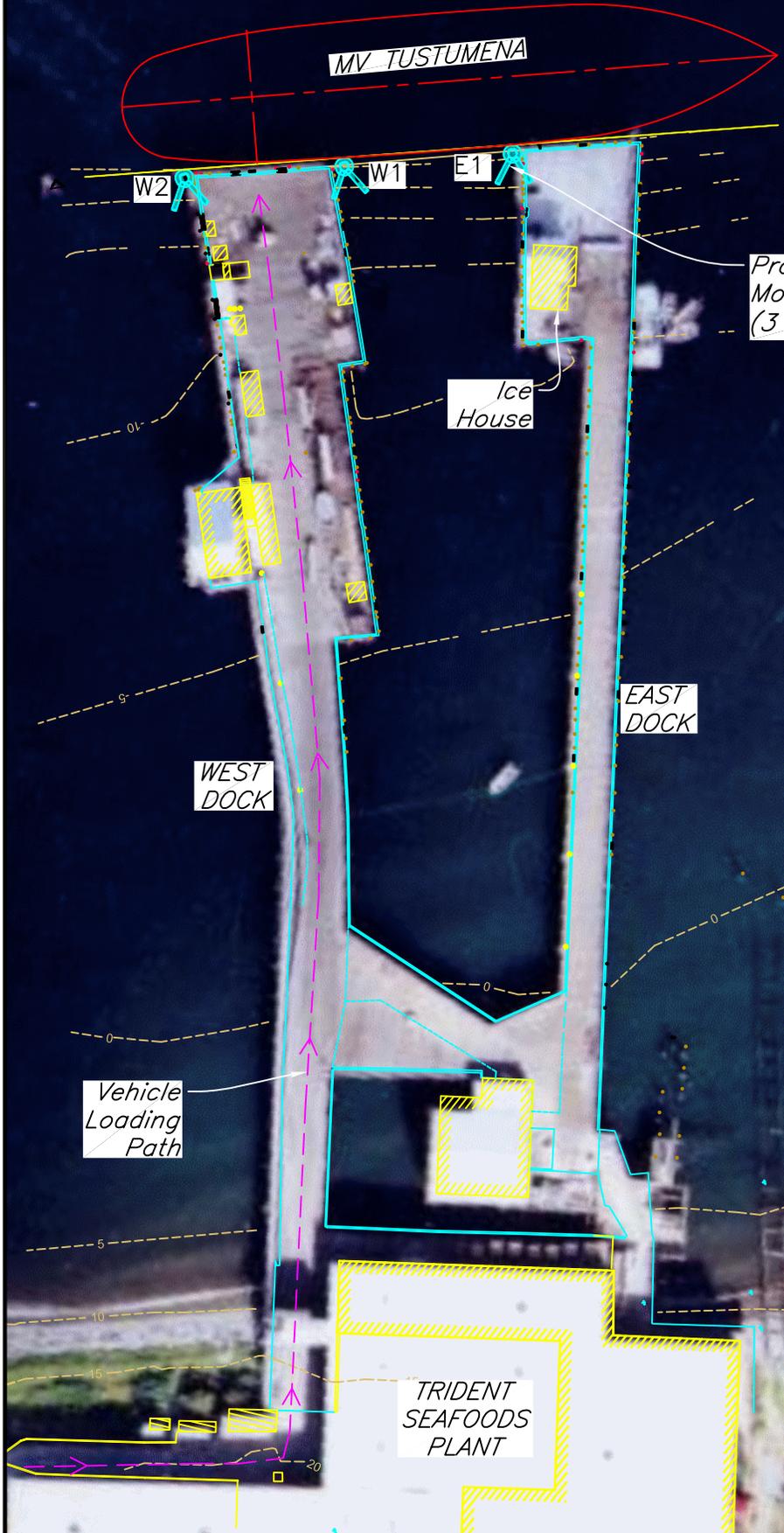


VICINITY MAP

Proposed New Steel Mooring Dolphins, typ. (3 each)



GENERAL LAYOUT CHIGNIK

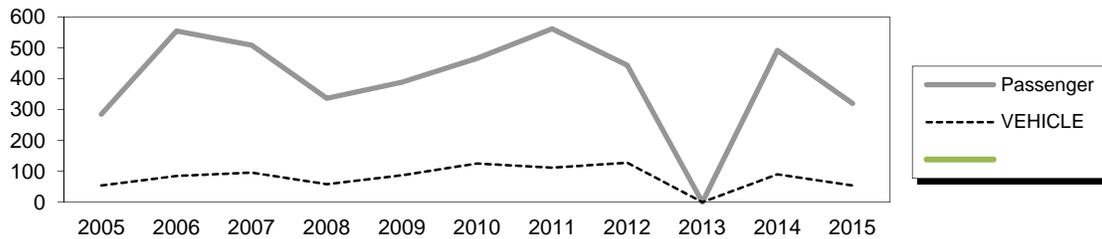


Chignik Dock

Owner: Trident Seafoods

Terminal Manager: Robert Carpenter, Trident Seafoods 907-749-2277

Terminal Description: The M/V TUSTUMENA docks at the old NorQuest seafood processor facility in Chignik during its May through September Aleutian Chain trips. The old NorQuest fish processing dock is an all timber structure built circa 1960. Trident Seafoods purchased this facility in 2006. The dock is U-shaped with the open side facing seaward. The west leg has a face 61' long and includes an icehouse, two pedestal cranes, and other ancillary equipment for commercial fish operations. The east leg has a 52' long face with a fuel shed and propane storage tank. The past 10 years of total passenger and vehicle traffic at Chignik is shown below. Chignik had no ferry service in summer 2013 while the M/V Tustumena was in the shipyard for repairs.



The most recent above water survey was completed on September 6, 2012. The underwater inspection occurred on July 30, 2009.

Vessels	
Name	Berthing, Alignment
Tustumena	Starboard

Tidal Data (MLLW=0.0 feet)	
Highest Observed	12
MHHW	7.3
MHW	6.6
Lowest Observed	-3.5

Terminal Building
This facility does not have a terminal building.

Generator & Building
This facility does not have a generator on-site.

Utilities @ Dock
There are no utilities at the City Dock.

Uplands	
Short-Term Parking:	N/A
Long-Term Parking:	N/A
Staging Area:	N/A
Paint Striping:	No
Driving Surface:	Gravel/ Timber

Old NorQuest Dock - #1826	
Type:	Timber U-shaped: East leg - 52' long; West leg - 61' long
Year Built:	ca. 1960
Dock Support:	Timber Piles spaced 8-12 ft., 12" x 12" timber caps, 4" x 12" stringers spaced 16-20" and 3" x 12" decking.
Pile Coating:	Creosote
Fenders:	Timber Piles along face and sides of each leg.
Lighting:	Light poles mounted on dock.
Condition:	Poor
Load Posting:	5.5 Tons Tandem Axle or 7 Tons Tandem Group

Dolphins						
Dolphin	Dolphin Piles	Fender Face	Anodes	Built	Cond.	Notes
W3	2B, 2V	None (Rubs on Pile Face)	No	N/A	Poor	The dolphins have neither a wearing surface nor energy absorbing elements.
W2	1V	None (Rubs on Pile Face)	No	N/A	Poor	
W1	1V	None (Rubs on Pile Face)	No	N/A	Poor	
E1	1V	None (Rubs on Pile Face)	No	N/A	Poor	
E2	1V	None (Rubs on Pile Face)	No	N/A	Poor	

LEGEND

V = Vertical Steel Pipe Piling

B = Battered Steel Pipe Piling

Observations

1. Vehicle access from the ship to shore is limited by height, maneuverability, and weight. Vehicles must pass beneath an overhead electric line, negotiate a 90-degree turn, and cross a light capacity bridge. Access is presently somewhat easier since building structures next the trestle approach burned down in 2008. The dock has been posted with weight limits of 11,000 lbs. single axle or 14,000 lbs. tandem axle. This load rating is not based on the dock itself but on the load rating of the light capacity bridge leading to the dock. The dock structure supports freight and cannery operations; the actual load capacity of the timber dock is not known, but is certainly light duty and should be limited to passenger vehicles only.
2. In 2006, the light capacity bridge, State Bridge Number 1554, crossing Cannery Creek was shut-down as a result of State bridge inspection. All vehicle transfers during this time were either routed through the cannery facility and across the Norquest Bridge, or the Tustumena moored at the Chignik Pride cannery dock. The DOT statewide bridge design section load rated each bridge, forwarded the load limits to Trident, and, subsequently, loads were posted at each location. Trident improved the load capacity of BN 1554 in 2007 by placing additional stringers beneath the bridge, full length. DOT bridge section re-ran the load rating of the structure based on improvements, and re-opened to the public.
3. The underwater inspection in 1994 indicated the timber fender piles along the faces of the two legs are suspended from the dock and not driven into the ground; therefore, all of the berthing loads are resisted by the dock. During the 2004 inspection, the facility manager stated that they have moored 400' tramp steamers using numerous cleats; however, the vessels are released when winds exceed about 20 mph.
4. The 2009 underwater inspection report found that 23% of the structural piles on the West dock and 33% of the piles on the east dock have significant deterioration in the form of advanced section loss, crushing and large checks and splits that affect the structural capacity of the pile. Cross bracing also has widespread deterioration. The diver engineers recommended that structural piles, cross bracing, and broken fender piles be rehabilitated or replaced, then perform a load-rating of the structure. At least one pile beneath the west dock does not align with its respective pile cap. Also, many piles have been shimmed to make contact with pile caps. The 2012 inspection by DOT&PF marine design staff traveling on the ferry revealed a failed area of the deck due to an inadequately supported spliced timber cap member. The deck area was covered by two steel plates and vehicles were driving over it causing noticeable deflections. State inspection staff notified Trident and AMHS to cone this area off limits to vehicle use.
5. There are some steel mooring dolphins that are in poor condition. The dolphins at the east corner of both the west and east legs are leaning. All of the dolphins appear to have been fabricated on site and are of minimal lateral load capacity. The dolphins lack fenders, are poorly positioned for ferry use and the eastern most mooring has previously caused damage to the bow. This facility is not able to accommodate the M/V KENNICOTT.
6. The fender and mooring system for this dock is inadequate for use by the Tustumena. One corner of the west dock appears unsupported, there are numerous broken and missing timber piles and the steel pile dolphin structures are a hazard to the hull of the vessel. Lateral resistance of both the east and west docks is likely very low. Extreme care is exercised by the vessel crew in approaching,

Observations (continued)

- mooring, and departing this dock. Berthing at this facility should only be attempted in calm weather.
7. Structural and fender repairs were conducted by Trident Seafoods in conjunction with supplemental funding provided by the Lake and Peninsula Borough, in May of 2013. SE Region marine staff assisted with design recommendations for the provision of three new steel pile breasting dolphins.
 8. Due to weather limitations, the inspection crew could not mobilize to Chignik in 2014.

Inspection Summary		
Structure	Priority	Recommendations
<i>Category I - Safety Issues</i>		
Timber Dock	1	The existing east & west docks are in an advanced state of disrepair & deterioration. The facility requires a detailed engineering inspection, load rating and applicable repairs to provide continued safe use by AMHS.
New Pile	2	There is a missing pile and cap splice in an area of the dock that vehicles constantly drive or park over. It would appear that additional structural reinforcement or a new pile is needed.
Load Limits /Height Restrictions	3	AMHS Operations are aware of the load limits and height restriction for this dock.
<i>Category II - Rehabilitation Work</i>		
Refer to the Safety Issues.		
<i>Category III - Upgrades Needed</i>		
New Dock Facility	4	The existing dock structure currently in use is inadequate for vehicle transfer operations. AMHS is signing one-season dock use agreements with the City of Chignik (the City of Chignik has in turn signed an agreement with Trident Seafoods). Future use of this structure is questionable and a new facility is ultimately needed. AMHS should continue to support the City's effort to construct a new dock to provide continued, reliable ferry service.

Chignik Dock Improvements:

Three new steel mooring dolphins and other structural and fender repairs to the existing timber dock were completed by Trident in 2013.

NOTES:

1. In 2010, it was determined that this privately owned facility does not qualify for National Bridge Inventory (NBI) inspection funding. As a result, there will be no further federally funded bridge inspections.
2. There were no AMHS vessel landings at Chignik in 2013 due to the M/V Tustumena shipyard work.
3. AMHS continues scheduled service to Chignik at the Trident dock under a temporary operating agreement with the City of Chignik and Trident Seafoods.
4. The Lake and Peninsula Borough has funded the design of a new dock in the City of Chignik. The new structure is an open-cell sheet pile wharf with fender units along the face – located between the Chignik Pride dock and the current Trident dock. The dock is to be constructed in 2016 with federal aid provided by the Department of Transportation. The Department has an active project to manage the completion of design and construction of the new dock structure.