

CAPISTRANO BAY DISTRICT  
AGENDA REPORT  
February 26, 2019

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*New Business*

## ITEM 10a

### Road Flooding Issues

Along the entire 1.5 miles of Beach Road are twelve storm drains that carry runoff out to the beach. One of these is the 7 ft. wide, open concrete channel next to 35067, with the remaining eleven drains running underground in large pipes, averaging 24" to 36" in diameter, with an average length today of 85 ft. to 110 ft.

These drains used to extend much further out onto the beach but over the past 7-8 years, beach erosion and wave action continues to break off sections of pipe as the beach and the outfall ends of our drain pipes retreat landward.

Over the years many designs have been used to prevent ocean water, sand and rocks from washing into the open end of these pipes. The wave runup action is relentless and all the forms of barriers we've tried have been washed out by high tide wave action, typically within one season.

Another cause of flooding is from the filters that are now required to be placed at the intake end of the drains, at the catch basins in the roadway. These filters can become clogged with leaves and debris that prevent runoff from flowing into the catch basins.

As a consequence of clogged filters or when a barrier gets washed out, our pipes can get choked with wet sand, gravel and beach rocks. If allowed to dry out for too long, the mixture can set up almost like cement. With the drought of the past few years, we now have two drains that are choked with this cement-like material and are flowing at about 10% of their design capacity. These are located at 35595 and 35787.

During the very heavy mid-February rains, the RR parking areas from 35561 to 35615 (15 houses) became flooded with 6" to 12" of water, making the parking area along that stretch of road temporarily inaccessible. With the constant rainfall, the flooding in that area lasted for about a week. Fortunately, the road in this location tilts slightly downward toward the RR parking so while the parking area was flooded, the roadway only had a few inches of standing water (out to about the middle of the road with no garage flooding) and vehicles did not have a problem with driving through the shallow water.

The suggestion was made to get a gas-powered pump to chase after the flooding and keep the road flood-free. A 4" diameter 'trash pump' with discharge and suction hoses rents for \$115 per day OR the District could purchase new equipment for about \$2350. Renting is a more cost effective solution but when it rains the equipment rental yards sell out in the first 5 minutes making rental pumps very hard to get. The downside to purchasing is the lack of use. A trash pump that just sits unused will corrode and freeze up in about 2 seasons – we tried this many years ago and the thing just became a hunk of rust. A pump could easily sit unused for four to five seasons in between significant rain events.

Every effort is being made to break up the sediment obstructions in the two pipes described above, and with this upcoming week of dry weather we hope to get both cleaned out.