

Storm drain project stirs flooding fears

By Paul Young
Staff writer

LONG BEACH – City divers swam into a concrete culvert between Colorado Lagoon and Marine Stadium this week to settle a heated dispute over a \$14 million storm drain project. But it doesn't appear the argument will be over any time soon.

The culvert became the center of debate when Colorado Lagoon area residents said the rectangular concrete structure – designed to allow tidal flushing – was too small to handle storm runoff from the planned Termino Avenue Drain Project.

Meant to alleviate flooding in a 596-acre watershed that naturally flows into the Colorado Lagoon, the Los Angeles County project begins near Redondo Avenue and Pacific Coast Highway and heads southeast to the lagoon and Marine Stadium.

They shouldn't flood Peter to save Paul. Basically, that's what this is about," said Bruce Bartram, an attorney for Friends of the Colorado Lagoon, whose 2,500 members question the project's design.

Resident's worries about flooding grew when they learned that a Long Beach Fire Department diver in November estimated that the culvert was 6 feet wide by 6 feet tall, much smaller than the 14-foot-wide by 7-foot-tall dimension that was given to county engineers.

So, at the direction of city officials, three lifeguard divers swam 50 feet into the structure Thursday and determined that the city's blueprints of the culvert were accurate.

But Michael Pauls, president of Friends of Colorado Lagoon, remained skeptical.

"I have some questions with respect to the potential political bias here," said Pauls. "I'm very concerned with the discrepancy between the dive that took place in November, and the investigation that took place (Thursday). ... In my mind, this is not resolved until I'm been able to look at their information, have my engineer look at the information and do a proper analysis."

He added that he would like the coalition to send an independent diver to make measurements, and will ask the city's help in getting access to the drain, which is behind heavy gates.

The debate in recent months has stirred the interest of city and political leaders, prompting 3rd District Councilman Frank Colonna to form a Colorado Lagoon advisory committee that would address a long-range plan for the water body. City insiders say that it has been a touchy issue within City Hall.

The coalition argues that during a large storm, the new system would collect water from areas as far as roughly 10 blocks away and flood the neighborhoods surrounding the 13-acre body of water. They also say it would devastate the surrounding environment.

County engineers, who based their calculations on the dimensions the city gave them, say their design would actually dump less water into the lagoon and alleviate flooding, not just north of the water body, but around it as well.

“They’re getting the Cadillac system,” said Rene Bobadilla, one of the county engineers who designed the drain. “This is a huge benefit to the lagoon itself. If we do nothing, it would stay status quo, and all the bacteria and everything would continue going there.”

Model drain

The engineers are proud of their design, meant to be a model for storm drain systems across the nation, said James Yang, who is running the project for the county.

Typically when it rains, the water runs through the streets and some underground piping to the lagoon, Yang said. The proposed storm drain system would collect most of the water and allow it to flow through a much larger underground drain.

The storm drain system would involve constructing approximately 13,500 feet of reinforced concrete box lined with catch basins and other pollutant-stopping devices. It would end on a northwest bank of the lagoon.

During dry months – when runoff from hoses and other sources – the roughly 50,000 gallons of runoff would flow daily through the proposed drain and be diverted to a low-flow diversion system just before it reaches the lagoon.

Here, the runoff would pass through a trash and pollutant filter, called a Continuous Deflective Separation Unit, then flow into a pump station. This would be built to pump the water into a sewer line leading to the Joint Water Pollution Control in Carson, where the runoff is treated before being discharged into the Pacific Ocean.

During larger storms, Yang said, only the first flush of water – which usually contains most of the pollutants – would go through the pump station. Once the pump station reaches capacity, the runoff would flow only through the trash and pollutant filter, bypassing the pump station on its way to an outfall into Marine Stadium. An even larger flow would bypass the low-flow diversion line and be dumped directly into Colorado Lagoon untreated. This water would exit through the concrete culvert, on the lagoon’s southeast bank.

Yang said that none of the runoff that now runs into the lagoon is treated. He also said that in a 50-year storm, the county's proposed project would divert 37 percent of storm runoff away from Colorado Lagoon to Marine Stadium. During a typical annual rainstorm, he said, more than 70 percent of storm runoff would be diverted.

"We are trying to be as sensitive as we can as far as environmental issues are concerned," said Zahid Atashzay, who is also working on the project. "We are trying to mitigate what we can."

The memo

A Fire Department internal memo had raised questions about the culvert because it contradicted the city's as-built specification that were used in the drain project's calculations.

The internal memo, sent March 15 from Long Beach lifeguard Chief Mark Boone to Long Beach Fire Department Chief Terry Harbour, said that the culvert appeared to be 6 feet tall by 6 feet wide.

This information came from diver Don Johnson, who swam into the culvert in November to determine whether it was clogged. While inside, he estimated the size of the culvert using his arms.

When the size of the culvert was questioned five months later, city officials asked Johnson and other at the dive to draft a memo stating their estimation of the size, said Jeff Edwards, the city's superintendent of beach maintenance.

When Johnson returned to the culvert Thursday with a measuring tape, he determined it was larger than his November estimation and that his new measurement agreed with the dimensions give to the county.

County engineers, meanwhile, said Johnson's most recent measurements established the size of the culvert as being accurate and will allow the project to move forward.

Coalition leaders concede that the system would improve the lagoon's polluted waters in some ways – especially in the summer months when it's not raining. However, they say the system just isn't good enough.

Major flooding

In 1995, a combination of high tides and heavy rainfall caused major flooding in the watershed, bordered roughly by Pacific Coast Highway to the north, Coronado Avenue to the west, Colorado Street to the south and Park Avenue to the east. It is the only time on record that the area surrounding Colorado Lagoon has flooded, Yang said.

Pauls said it was so bad that a nearby fire station couldn't get its emergency vehicles out of their building because cars were dead in the water and had to be pushed out of the way.

“It was a disastrous event for everybody,” Pauls said.

He worries that even if the culvert is as large as lifeguards said Thursday, the area around the lagoon could still flood again. Pauls said that the county, as well as the city of Long Beach, failed to adequately assess the impact on neighborhoods near the lagoon and marine life before they approved construction of the Termino Avenue Drain Project.

Members argue that while the underground drain may dump the same amount of water into the lagoon as it does now, there would be more water in the storm drain at one time. Because the main drain moves water more efficiently, it would discharge into the lagoon more quickly, Pauls said. The group said that at peak flow the proposed drain – a 19 1/2-foot-wide by 8-foot-tall box that is replacing two, 4-foot diameter pipes – would actually triple the amount of water flowing into the lagoon.

“With the new drain, you will probably have an increase in the flood level. It all depends on when (the water) gets there,” said Bob Gearheart, an engineering consultant hired by Friends of the Colorado Lagoon. “What concerns me about it is that when the flood passes into the lagoon, if the water can't get out, it will flood.

Flooding isn't the only issue raised by the coalition. The group filed a lawsuit in July, challenging the county's finding that all major environmental impacts on the lagoon would be mitigated by the way the drain was designed.

Pauls and other members worry that the influx of fresh water during a large storm would dramatically change salt levels in the lagoon, potentially killing the fish.

In addition, they say that the storm drain outfall would also erode the lagoon floor, stirring polluted sediments.

“Those sediments will be reintroduced into the water column and (the erosion) puts them back into the food chain for the fish and for people,” Pauls said. “We want to see the lagoon partially restored.”

The county side

The county disputes these claims, first by saying that the drain outfall has been designed to slow the runoff before it hits the lagoon to help prevent erosion. In their design, engineers submerged the outfall and designed a 3-foot wall inside it to dissipate the energy of the flow. They have also proposed installing a material called ArmorFlex, which would be placed in front of the outfall to keep the lagoon floor from eroding.

Addressing perceived salinity problems, Yang said he's convinced that the new system would actually improve the lagoon because less water would be flowing into it.

He adds that there would be no threat of flooding with the new system. Using a 50-year flood as a model, he said engineers' calculations show that the water flowing from the storm drain into the lagoon would always be less than the amount that pours into the water body now.

In addition, engineers say, they've spent \$3 million more than budgeted to address environmental concerns of Friends of the Colorado Lagoon and the surrounding community.

Friends of the Colorado Lagoon say they will fight as long as they can to make even more headway. Its leaders are working on a master plan to restore the water body.

Pollution

In a 1998 study, researchers found nearly 60 percent sediment taken from the west end of Colorado Lagoon was significantly toxic to shellfish. The water body is also named on the Environmental Protection Agency's Clean Water Act Section 303 (d) list, which established where water officials should concentrate their efforts to identify sources of harmful chemicals and waste material. In the lagoon's sediments and marine life are elevated levels of chlordane, lead, DDT, PCBs and zinc.

Billions of gallons of runoff have entered the lagoon over the last 60 or 70 years ... Our goal is to clean the place up and to allow people to enter the water without having to worry about getting sick," Pauls said. "We also want it to be safe for the fish ... and for the migratory birds that come to the lagoon."

The group's master plan also has an educational component, designed to establish science programs for the roughly 5,000 students who go to school in the area.

"We are trying to create a system here that's compatible with the cleanup and restoration effort of this lagoon," Pauls said. "We don't want the perception of the Colorado Lagoon to be one of a flood basin."