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Cliff erosion is a costly, hard-to-solve problem

California faces a \$1 billion coastal repair bill, a state Senate committee was told last Wednesday afternoon in Capitola.

Tom Tobin, chief engineer for the California Coastal Commission told three state senators, including Sen. Henry Mello, that it could cost up to \$1 billion to repair and protect 126 miles of threatened coastline in the state.

But UCSC geology professor Gary Griggs earlier told the same senators that the state should take a hard look at the coastline and perhaps "write off" public and private development in areas where experience has shown they will continue to be assaulted by the ocean.

A second geologist, Gerald Weber of Santa Cruz, told the senators that the Santa Cruz County coastline may have been enjoying a bonanza of sand for its beaches for the last 350 years and that supply has just about run out.

The testimony was part of a day-long hearing last Wednesday at the Capitola City Hall in which public and private officials testified about coastal erosion along the 1,100 miles of California's coastline and what can or should be done about it.

About the only thing agreed on at the hearing is that California's coastline is in trouble and the need for a comprehensive data bank of scientific and engineering studies on the state's coast, including the effects of ocean waves on the beaches and bluffs.

Weber told Mello and

The evidence, he says, is already beginning to accumulate in the narrowing over the last decade, of the beach at New Brighton and Seaciff.

The historical evidence, UCSC professor Gary Griggs told the senators, is that a major ocean storm erodes the Santa Cruz beaches away every seven to eight years.

Weber believes that cyclical process will accelerate to once every one or two years.

Griggs told the state senate committee earlier in the day that newspaper records show that for the last 70 to 80 years, there has been a major seawall or bulkhead destroyed in the Midcounty by the ocean "every seven to eight years."

"Yet they continue to be rebuilt," Griggs told the committee.

He was critical of the decision by the state to spend \$2½ million rebuilding the seawall and recreational vehicle parking at Seaciff State Beach.

"Why are we doing it?" Griggs asked. "We know it will be hit again."

Griggs said the official state cost-benefit ratio for the rebuilding is 14½ cents a day per visitor to the state park over the next 20 years. But the professor believes a more realistic assessment would be based on the number of recreational vehicles using the spe-

cial RV campground protected by the seawall. That, he said, works out to \$13.70 a day for each RV using the campground — assuming that the seawall last for 20 years.

Griggs doesn't think it will.

Griggs told the committee that scientists are now able to determine which portions of a coastline are subject to active erosion.

He advocated banning development in areas where experience and the available evidence shows that erosion is occurring.

But what do you do about the developed areas?" Assemblyman Sam Farr, who attended the morning session, asked Griggs.

"That's a problem that will plague us for years to come," Griggs said, suggesting that the tradeoff has to be the public cost of improvements and protective devices vs. the public benefit.

That's the situation in Rio del Mar where more than a million dollars in public funds was spent to rebuild Beach Drive and its protective seawall after 1979 storms wiped it out.

Griggs maintained that the state should spend no more money there. "But if private property owners can afford to protect their property, it is hard to stop them."

The only way for government to extricate itself from the political dilemma of using public funds to protect private

property would be to acquire the threatened property, Griggs said.

Mello and Presley seemed uncomfortable with the solutions recommended by Griggs. Mello said his solution, in the case of Seaciff and Rio del Mar, would eventually peril the freeway and seemed to argue that the state had to protect private property in order to eventually save the state highway.

Presley summed up the geologist's testimony, telling Griggs his recommendation was to "leave it up to nature."

But Schmitz, a lame-duck Orange County conservative Republican, seemed to agree with the geology professor, saying he doesn't believe people in California should be asked to pay for those who live near the ocean despite the threat.

Tobin told the committee that 120 miles of the 1,100-mile California coastline is already protected to some extent from wave action, and another 126 miles of developed shoreline is considered to be in critical danger from erosion.

He said the commission believes it will cost upwards of \$1 billion to build protective devices along those 126 miles.

"California has a billion dollar erosion problem," Tobin told the

committee.

The Coastal Commission philosophy, Tobin said, is to control development along the remaining 800 miles so that there are not conflicts between people and nature.

He said there is an enormous hidden public cost even when the damage is to private property and there is no overt use of public funds to repair the damage.

The Coastal Commission made a survey following the 1977-78 winter storm season and found \$18 million in damage, including \$12 million to public facilities and \$6 million to private property.

Yet, the public cost to repair all of the damage was \$16 million, Tobin said.

He said the Coastal Commission tries to work with private property owners wanting to repair and protect developed property from the ocean.

That statement was disputed by Opal Cliffs resident Bob Moreland, who outlined the frustrations and delays he says he has been experiencing with the commission and county government in getting approval for a prefabricated, privately-financed seawall he wants to see installed in front of his and his neighbors' cliff-front property.

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Weber told Mello and Sens. Robert Presley of Riverside and John Schmitz of Corona del Mar that his research over the last few years points to evidence that coastal erosion in Santa Cruz county will begin to accelerate in the next few years.

Weber told the committee that in the 5,000 years since the ocean level stabilized, there has been very rapid erosion of the Midcounty coastline. But that erosion suddenly slowed a couple centuries ago, and Weber has been trying to discover the reason.

He said it is all tied to events over the last 350 years at Ano Nuevo Island. Back in the early 1600s, he said, there was no island. Instead there was a peninsula extending out from the present coastline to where the island is now one-quarter mile off the shoreline.

Sometime in the next century, the sand peninsula began to erode at a rapid rate — erosion that continued into modern times.

The millions of cubic yards of sand released in the erosion process, Weber said, joined the sand that is flushed into the ocean every year by the county's rivers and streams, and was ultimately deposited on the beaches in Mid- and South County.

The wide beaches prevalent along New Brighton, Seacliff, Rio del Mar and the South County since the arrival of Caucasians was the legacy of the Ano Nuevo erosion, Weber said.

Those beaches sheltered the bluffs behind the beaches from the incessant pounding of the ocean waves, slowing the erosion rate dramatically when compared to what Weber believes has been occurring in the preceding 5,000 years or so.

Now, Weber believes, we will begin to see those beaches shrink in width and erosion and storm damage along the coastline increase dramatically.

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