Alford, Patrick

From: Terry Welsh [terrymwelsh@hotmail.com]
Sent: Sunday, November 06, 2011 8:19 PM
To: Alford, Patrick
Subject: dEIR comments for Banning Ranch
Attachments: Jim Orstad File.pdf

"Orstad File"
The late Jim Orstad compiled a lengthy and referenced written argument on why a residential development should not be built at Banning Ranch. The "Orstad File" had been previously submitted as part of the EIR comments for the Sunset Ridge Park project, but is again especially relevant to the proposed Banning Ranch development. The "Orstad File" is being resubmitted to be included in the record for the draft EIR for Banning Ranch (please see attached Sunset Ridge EIR comments, pages 398-414 of 602)

BANNING RANCH HAZARDS

Researched by James Orstad

As a proponent of Banning becoming a Park or a game Reserve, my efforts are directed in finding Reasons why Banning would be less suitable for development. In reviewing history, Environmental Impact Reports, New clippings and lawsuits; but more rewarding were Geological reports. A recent report by the department of Geological survey puts Banning in a very risky position.

There are several HAZARDS present. Some may never be SAFELY MITIGATED. Others may be too costly to mitigate. Coastal Committee guidelines found Helpful

The Reasons for putting together this report are: To alert all City, County, and State planners. Also to perhaps discourage any financial backers or Developers to RISK the many liabilities they may well endure for many years.

James F. Orsted
6/3/2004

REEVALUATE BANNING HAZARDS

Planners and Contractors find no problems in developing Banning Ranch Oil Property into residential and business. However history, geological reports both new and old point out several HAZARDS, both natural and man-made. Many are not likely to be safely mitigated. Pollution is the 1st hurdle. Records from the Division of Oil and Gas prove there was crude oil outcrops, gas and Wild Cat drilling in 1904. Crude oil is known to pollute an area and cause cancer and birth defects. Early drillers used toxic chemicals to clean their equipment. All wells had sludge pits where this toxic material was buried. It is also known early drillers left improperly sealed abandon well sites. These continue to contaminate the soil. They must be located and Re-Abandon. PCB was an effective cleaning agent very popular and its pollution found on many oil fields. Any direct contact or even inhaling its dust was devastating. Such areas were fenced off in Huntington Beach. Orange County reports over 900 deaths per year are attributed to inhaling toxic dust particles (SEE Register News Page 1 May 16 2002) If no precautions are taken, it could present a danger if Banning construction would kick up dust and blown by Sea Breezes to surrounding communities. In 1999 the present Oil company was cited for possible ENVIRONMENTAL VIOLATIONS.
A thorough soil study should be manditory before any planning proceeds.

2) Methane Gas Seeps are another hazard exposed by geological reports and adjacent homeowners. Methane is highly explosive Several new projects and schools require Vents and warning systems.

3) Unstable Bluffs, risk any development

The bluffs on Banning Oil property are a hazard because of natural and man made conditions.

CONT

II

A) In the 60's, CALTRANS EXCAVATED A ROAD through Banning, to link with a proposed Coast freeway. The idea was dropped. However Bluff hazards increased when their natural support was removed.

B) World War II Gun emplacements were later removed, then FILLED! Other Fill reported in studies of the bluffs.

C) BANNING was found to contain many old faults, some with displacements of 2 to 3 feet. Recent studies with an announcement by Lvale M. Jones of the U.S Geological Survey, changes their status to a HAZARD.
Late studies found EARTHquake Epicenters effected land disturbance within a 100 mile RADIUS. Newspapers have announced ANCIENT Volcanoes and faults were trigged into ACTION.
These Banning faults lie within this RADIUS of 5 Epicent
Also they are magnified by a Recent Thrust Fault found under our Coast Highway near HOAG Hospital
(SEE the EIR Report No 142 REGARDING HOAG)

d) Tention CRACKS Reported on some bluffs

e) Bluff composition not stable and prone to slides

Costa Mesa was sued in 1991 by several No. Mesa Verde homeowner and won their case for allowing construction that caused slide damage on the Greenville Banning property.

Evidence seems to indicate there exist many circumstances on Banning property for potential law suits, if development persist. These HAZARDS should be made public, as hiding these facts are unlawful.

- NOTE -
ALL Statements in this report is substantiated by EIR. Geological Reports, News ARTICLES and various Department Correspondence.

JAMES L ORSTED

SUMMARY

A. The Planning Department needs to know what liabilities it faces, if it approves construction.

B. Investors, loan, insurance and real estate companies, as well as prospective buyers, have a legal right to be told of these hazards. Concealing these dangers is felonious.

C. Unstable hazards make it impossible to safely mitigate.

D. Construction will kick up dust pollutants and sea breezes will spread it to neighboring families. High bluffs make it difficult to control dust by watering. Excessive water will also spread contaminants. Even the "El Nino" rains are dangerous.

CONCLUSION

A far safer plan would be a Park and Wild Game Nature Preserve to attract tourists. There are hundreds of various birds, animals and reptiles, many of which are on the endangered species list. The Sierra Club is on record as desiring to develop Banning Ranch as well as enhancing its wetlands. This plan should satisfy the State, please the Coastal Commission, and delight our Mayor and the citizens of both Newport Beach and Costa Mesa.

Draft by: James L. Orstad

James L. Orstad
11 Summerwind Ct.
Newport Beach, CA 92663
949-548-5931

FACTS TO CONSIDER

In 1904 Wildcat oil drilling began on Banning Ranch. Arsenic and other toxic chemicals were used to clean their drilling equipment. The waste was dumped in open sludge pits. Two cylinder gas engines operated their equipment. Petroleum Hydrocarbons were also present. Later, companies were using Benzopynene and polychromatic biphenyl (PBC) Buried debris like asbestos and unmapped pipe lines existed. Banning has old storm drains below ground. Who will be able to certify the area as clean to develop?

Pollution deaths studied

Environment • Group says its report, based on data gathered by the state, justifies tighter restrictions on airborne particles.

By PAT BRENNAN
The Orange County Register

Air pollution from fine particles kills an estimated 9,300 people in the state each year, including more than 900 in Orange County, an environmental group contended in a report released Wednesday.

The report is based on figures gathered by the state Air Resources Board and the Office of Environmental Health Hazard Assessment. Those agencies relied on a variety of epidemiological studies worldwide to make statistical links between particulate pollution and death and illness.

The Environmental Working Group, based in Washington, D.C., is using the report to push for tougher standards on fine-particle pollution, to be considered June 20 at a meeting of the state Air Resources Board in El Monte.

State and federal regulators are working on new, tighter standards for fine particles, the road dust, soot, bits of burned oil and brake linings and other microscopic bits suspended in the air.

"We usually find ourselves criticizing state regulators for not going far enough," said Bill Walker of the Environmental Working Group. "In this case, the state regulators have taken some pretty bold step in terms of advancing a new frontier in the protection of public health."

Experts believe these tiny particles may lodge deeply in the lungs, leading to a variety of health problems. They come from car exhaust, large industrial plants and other sources.

New federal rules may take several years to develop. But the state air board could adopt new California standards at the meeting next month.

O.C. REGISTER
Thursday 5/16/02
Page 1

UNSAFE WELLS STILL EXIST

So. Coast Air Quality Mgmt. District (SCAQMD) found several wells on adjacent Hoag property that needed to be re-abandoned for contamination reasons.

LOS ANGELES TIMES
B4 TUESDAY, APRIL 16, 2002

HUNTINGTON BEACH

State to Notify Residents Near Contaminated Site

Residents who live within a mile of a Bolsa Chica site contaminated by a cancer-causing agent will receive notices from the state Department of Toxic Substances Control this month.

Officials have known for three years about the polychlorinated biphenyl, or PCB, contamination on 1½ acres of unincorporated county land owned by Signal Landmark near the end of Graham Street.

The carcinogen is not carried in the air and is not expected to leach into the ground water, said Lucy Dunn, executive vice president of Hearthside Homes, which is trying to develop nearby land. Contact with the soil could be harmful, but the site has been fenced for more than a year. The source of the contamination is unknown, though it could be from past oil operations, illegal dumping or electrical transformers, officials said.

SUMMARY OF OPERATIONS

California Oil Fields

THIRTY-SECOND ANNUAL REPORT
OF THE
STATE OIL AND GAS SUPERVISOR
ISSUED BY
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

Vol. 32 SAN FRANCISCO, CAL., JULY-DEC., 1946 No. 2

WEST NEWPORT OIL FIELD

EXCERPTS

By CHAS. H. CORWIN[a]

INTRODUCTION

The West Newport oil field is in Orange County, just northwest of the old Newport oil field and near the southeast end of the Beverly Hills-Newport uplift line of folding. The field consists of four areas; namely, Banning, Atha, Callens, and Lyddon. The Banning area, with a relatively large number of wells, is more readily interpreted than the three remaining areas, each of which is far more complex structurally, and in which are comparatively few wells. Future development in the Callens, Atha, and Lyddon areas may furnish additional data which may slightly alter the present structural picture.

HISTORY

The presence of oil showing in seepages and outcrops caused numerous wildcat wells to be drilled in this area, some dating back to 1904. The discovery well (now known as Macco Corporation well No. "Banning" 1, Sec. 20, T. 6 S., R. 10 W., S. B. B. & M) which led to the development of a commercial field, was drilled on the Banning property in April, 1943, by D. W. Elliott.

STRUCTURE

The structure of the West Newport field is a northwesterly plunging nose that is highly complicated by both major and minor faulting. This faulting divides the area into several blocks, each of which will be discussed separately.

The present production in the Banning area is limited on the southwest by what is locally called the Inglewood fault. This fault, with the downthrown side to the southwest, has a strike of N. 45° W.; and its trace at the top of the "B" zone.

[a] Assistant Oil and Gas Engineer, Division of Oil and Gas.

DRAINS IN SEISMIC OR SUBSIDENCE AREAS ARE SUBJECT TO LEAKAGA

Officials target West Newport storm drain

Daily Pilot
MONDAY, APRIL 14, 2003
FRONT PAGE

Regional Water Control Board urges city to clean up runoff flowing into Santa Ana River that may be closing beaches.

Paul Clinton
Daily Pilot

WEST NEWPORT — Newport Beach, Huntington Beach and the county could face sanctions if they do not reduce polluted urban runoff flowing into the Santa Ana River.

Among the tributaries that drain into the river, the Santa Ana Regional Water Control Board is targeting in particular a large storm drain in Newport Beach that empties into the mouth of the river at Seashore Drive and Coast Highway.

See DRAIN, Page A4

DRAIN

Continued from A1

"Storm drains are laden with bacteria," Newport Beach Assistant City Manager Dave Kiff said. "I just know I've got to stop the bacteria from coming out of the pipe. . . . The board is telling us informally to solve this."

If city and county officials fail to reduce the amount of bacteria in the river, the board could issue a cease-and-desist order, which would mandate a cleanup.

The move is the latest regulatory attempt to reduce bacterial outbreaks along the shorelines of the two cities. Water-quality regulators have been scrambling to solve these mysterious outbreaks for almost four years.

At an April 3 meeting with city and county officials, Ken Theisen, an environmental scientist with the water board, urged officials to cut down polluted flow. Right now, the county is diverting about 30 million gallons per day from the river to a sewage treatment plant.

The concrete drain along Seashore and Coast Highway contributes about 10,000 gallons per day to the river mouth.

"It's very high in bacteria," Theisen said. "More than 80% of the time, it exceeds the [state] standard."

Newport Beach leaders have started investigating what could be done to reduce bacteria traveling in the drain, Kiff said.

However, Councilman Tod Ridgeway, a member of the Orange County Sanitation Board, said he isn't convinced the Santa Ana River is the source of the problem. Ridgeway was one of 13 sanitation members who cast key votes for increased treatment of wastewater released by the district via an outfall pipe.

"I'm not prepared to say with authority that it's the Santa Ana River," Ridgeway said. "I don't think we can say that."

Huntington Beach leaders could also face sanctions. That city saw its summer tourism industry decimated in 1999 when its beaches were closed after bacteria outbreaks.

Any blame that falls on Surf City's shoulders should be shared by inland cities, which also contribute pollution to the river, Huntington Beach Mayor Connie Boardman said.

Huntington Beach implements an annual summer diversion program to collect runoff heading to the Santa Ana River and send it to the Orange County Sanitation District.

"The same administrative order should also be placed into effect on the inland cities that contribute to the runoff in the river," Boardman said.

• **PAUL CLINTON** covers the environment, business and politics. He may be reached at (949) 764-4330 or by e-mail at *paul.clinton@latimes.com*.

EPA probing Banning Ranch water violations

■ Federal agency is investigating whether dredged, fill material was dumped into wetlands.

JENIFER RAGLAND
Daily Pilot

NEWPORT BEACH — The U.S. Environmental Protection Agency is investigating a possible violation of the Clean Water Act by the owner of the Banning Ranch property in West Newport and an oil company.

The property, bordered by West Coast Highway and the Santa Ana River, consists of a 292-acre mesa overlooking about 120 acres of degraded wetlands.

Landowners Aera Energy and Rancho Santiago Partnership have joined with housing developer Taylor Woodrow Homes to form Newport Banning Ranch LLC, a real estate venture proposing to build 1,750 homes, a retail village and a small inn on the mesa. About half of the land would remain open space.

Taylor Woodrow officials last week unveiled a plan to restore the degraded property into a viable wetland. The land has been the site of oil operations by West Newport Oil Co. for 16 years.

Rob Leidy, wetlands science and field program manager for the EPA's San Francisco office, said the agency was notified last spring that there may have been violations of Section 404 of the Clean Water Act on the Banning Ranch land. That section prohibits discharges of dredged or fill material in ocean waters and wetlands without a permit, Leidy said.

"We did an inspection and found there were activities going on that were resulting in dredged materials going into wetlands," he said.

In June, the agency ordered an end to the discharging.

Because the area has been used for oil production, Leidy said activities associated with closing old oil wells or building roads to get to oil facilities could have resulted in the illegal discharging of material.

John Flynn, an attorney for the landowners and developer, said it is difficult for his clients to comment about the matter until the federal agency completes its investigation.

"As far as we're concerned, there was no filling of wetlands by West Newport Oil or Rancho Santiago Partners or Aera," Flynn said.

Nancy Woo, chief of the EPA's wetlands and sediment management office, said the investigation is a civil matter and so far has involved the landowners and the oil company.

In November, the EPA requested information from both entities but has yet to receive a response despite several extensions, officials said. Woo said the EPA will not know whether the investigation includes Taylor Woodrow until it receives a response.

The businesses are planning to respond and are working with the agency, Flynn said.

The next step in the process is to visit the site and determine the boundary of the wetlands affected, Woo said.

Directly south of the Banning Ranch property are wetlands that were restored by the U.S. Army Corps of Engineers. Woo said the site may or may not have been

SEE BANNING PAGE 4

BANNING

CONTINUED FROM 1

affected by any discharge.

Leidy said violations of the Clean Water Act are punished either by fines or a requirement to do some restoration for the damages.

West Newport Oil also is the subject of a criminal investigation by the Orange County district attorney's office, along with state and federal agencies, for other possible environmental violations.

Officials at the district attorney's office and the state Department of Fish and Game have declined to comment on the details of that investigation. Flynn also declined to comment.

"It would be fruitless to speculate about what conclusions the DA might or might not reach," he said.

This Report for Hoag and Vicinity (page 6 section2.4) Oil property of Hoag and Banning are adjacent. They are considered common geological areas of gas seeps.

3.2 Methane

The effects of the local methane seeps in the Newport Beach area have been noted a including minor fires from the trapping of the gas within a confined space and economi impacts from source control measures and monitoring.

The hydrogen sulfide and methane gases are likely to be seeping from the soils, with the unknowns associated with the fractured geologic system, leads us to conclude that the concentrations and locations of gas seepage from the soils are very poorly known. Scattered fractures may be acting as conduits for the gases almost anywhere on the subject property.

5.1 Project Specific Impact

The project would result in the excavation of ~~170,000~~ cubic yards of soils to an undetermined depth. The disturbance of the soils may result in levels of hydrogen sulfide and methane, or another unknown hazardous constituent, in the atmosphere in quantities greater than the NIOSH, OSHA, and ACGIH limits, or in concentrations which may pose the threat of explosion.

- It is recommended that continuous monitoring for methane and hydrogen sulfide be conducted during the disturbance of the soils and during any construction activities which may result in an increase in the seepage of the gases.
- A study of other hazardous constituents which may be present in quantities which pose a health risk to exposed individuals should be evaluated prior to the initiation of the project. These may include compounds which are directly related to petroleum, such as benzene and toluene.
- potential for increased fault activity and gas seepage during construction-related activities.
- solubilized gases and byproducts in the water runoff form the site.

Vulnerable to Vapors

Abandoned Oil Fields Leave Dangers of Methane Blasts

By JANET WILSON
TIMES STAFF WRITER

As if earthquakes weren't enough, there's another invisible danger lurking beneath the Los Angeles Basin, from Newport Beach north to Newhall.

It is methane—a colorless, odorless, highly explosive gas naturally produced by the 70-odd oil fields on top of which much of the metropolitan area is built. The fields are primarily clustered along the area's major fault lines, where oil seeps out of ruptured rock.

So, if your community is built on or near a fault, there's a good chance it's also sitting atop abandoned oil wells—and methane. If not properly vented, the gas can work its way through even concrete foundations and cause disastrous explosions.

Along the portion of Orange County's coast that roughly coincides with the Newport-Inglewood fault, everyone from hospital construction teams to developers of gated communities are taking measures to reduce the threat of methane—or to harness it as an energy source.

Ironically, when it comes to methane, it's better to have pumping oil wells in residential areas than abandoned wells without proper venting. Once a well is abandoned, or even sitting idle, "what Mother Nature did to create the oil field, Mother Nature is going to continue to do—fill that oil field back up," Baker said.

And with the seeping oil come swelling methane fumes. If they find a weak link in an old well, where air mixes with the fumes, they can and do explode outward, ignited by as little as a light switch being flicked on.

"If you have oxygen and gas and a spark, you get an explosion," Baker said.

It is impossible to know how fast an area of an oil field will repressurize, but there are telling examples.

In 1973, a Newport Beach cottage owned by a retired sea captain began filling up rapidly with crude oil.

The culprit was an abandoned oil well directly below.

The force of oil rising from the improperly sealed well cracked the concrete foundation and flooded the kitchen.

The house was partially torn down to get to the leaking well and properly cap it.

Several years earlier, a real estate agent preparing to show a house in Balboa Coves sparked an explosive fire by turning on a light switch.

No one was killed, but the house was gutted in the blaze, which was attributed to trapped methane from an old well.

The risk of methane explosions "is probably very small, but it's always a possibility," Chalk said. "It's that 1% chance that worries you. . . . The gas will seep up through cement and eventually come to the surface. It's just good oil field practice to go ahead and vent something. Otherwise, an explosion can happen."

While oil fields could refill and repressurize, Chalk said Orange County beaches offer proof that a great deal of oil and related methane has been pumped out over several decades, reducing the risks.

Just down Pacific Coast Highway in Newport Beach, though, city and Hoag Memorial Hospital Presbyterian officials found the supply of underground methane to be endless—so they decided to harness it to power hospital boilers.

Hoag hospital is right across the highway from the neighborhood where the real estate agent turned on the light switch and blew up the house, and the hospital pumps out methane from under those houses now as a community service, according to Reveley.

No state law requires that permits be obtained to build on top of oil fields.

"We will always tell people, with the earthquakes, ground settling, all kinds of dynamics going on underground, the best way to mitigate is don't build over oil wells," Baker said. If they must build on them, then they need to vent, he said.

Any leaking well on the site, even if it is not near the planned building, must be reported immediately, and all wells under houses or businesses must be vented.

State engineers test for leaks and inspect capping and venting procedures before issuing a certificate

Times staff writer Edward Boyer contributed to this story.

RICHARD BAKER IS DISTRICT DEPUTY FOR THE DEPARTMENT OF CONSERVATION, DIVISION OF OIL AND GAS, STATE OF CALIFORNIA.

Los Angeles Times
B
CALIFORNIA
ORANGE COUNTY EDITION
Tuesday, November 11, 2003

Methane Is Out Before School Is In

CONDENSED

Banning Ranch and proposed School property are both Likely polluted

At campus sites across the state, districts are struggling with stringent rules on pollutants. The explosive gas is high on the list for cleanup.

By JANET WILSON AND KRISTINA SAUERWEIN
Times Staff Writers

Two years after the Belmont Learning Center controversy led California to require testing for contaminants at proposed school construction sites, hundreds of districts have found harmful substances in the soil, leading to costly struggles to balance health risks, liability and cleanup costs.

From arsenic to zinc, inspectors have found a long list of chemicals in the soil and air at 317 of those sites.

"You got to do what you got to do," Krall said. But because children are often more vulnerable than adults to the effects of pollutants, diligence is needed for school sites, said Ron Baker, spokesman for the state Department of Toxic Controls and Substances, which oversees the state's testing program.

"We're more concerned about kids because, obviously, they're closer to the ground. They're small. Also, kids like playing in dirt and sticking their hands in their mouths," Baker said. "Breathing, touching and eating — we're always going to be looking at those three exposure pathways."

Studies indicate that long-term effects of DDT exposure include nervous system damage and increased cancer risk.

Lead is another enormous challenge — 42% of the sites where contaminants were found have lead in the soil.

Children can develop brain damage, anemia and muscle weakness by eating paint chips or breathing particles that contain high levels of lead. Childhood exposure to lead contributes to attention deficit/hyperactivity disorder and can increase the likelihood of having a reading disability, dropping out of high school and participating in antisocial behavior, according to research.

Lead was widely used in paint until 1978. While many cities and states require lead testing in older residences, no such requirement existed for California school sites until the new laws were passed, Baker said.

Some land uses and chemicals are not examined, such as sewage sludge or perchlorate, and testing is required only at new construction sites.

Under the new laws, local school districts are required to pay for testing potential sites for contamination. First, historic uses of the land are analyzed, using aerial photos and relevant documents. If that analysis indicates the site might be polluted, soil and air samples are taken.

If large amounts of toxic substances are found and a district still wants to build, state officials devise a mandatory cleanup plan.

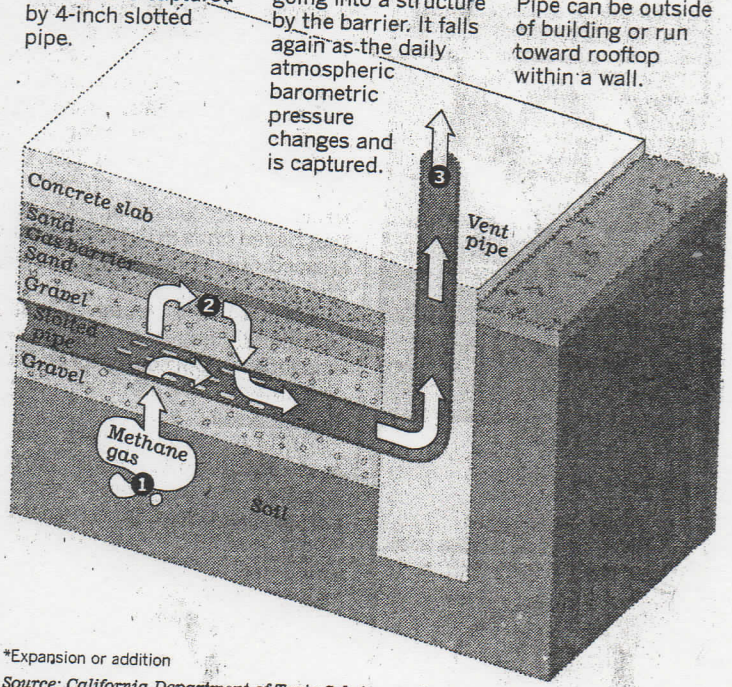
Work on Belmont began in 1997 but was stopped three years later amid worries about methane from former oil wells beneath the 35-acre property. After extensive work to reduce the hazard, the school district voted in May to finish the school, which, at $286 million, is the most expensive school construction project in state history. Environmentalists and regulators say that history lends support to the argument that testing sites before construction saves money in the long run.

Removing methane gas

The state has identified 14 proposed schools or schools slated for expansion that have high levels of methane. Gas-venting systems must be installed in any area that has more than 5,000 parts per million of methane. An explosion is possible at sites with more than 53,000 parts per million of methane.

Venting system

Methane gas can be safely removed or vented using a variety of methods. Below is an illustration of how one venting method works.



*Expansion or addition

Source: California Department of Toxic Substances Control

SLIDES AND SUBSIDY

1. Kenneth Henderson, an official of the State Department of Conservation, Division of Gas and Oil, stated: The State needs additional inspections and test requirements on all old oil fields in our coastal zone. (L.A. Times, 12/29/93, page A3.)

2. The famous Geologist Arthur Sylester reported in the Science Journal: "Coastal oil fields pose a big worry to earth movement when old fault lines and fissures allow subterranean fluids to weaken and cause hillside disasters."

3. Geophysicists now use G.P.S. "Ground Positioning System" to pinpoint land subsidence within a few thousands of an inch. Also to determine how and where it is occurring. This method uses satellites. California's state law in 1956 required oil companies to inject as much fluid as it took out of the ground. This technique prevents subsidence. However, between 1935 and 1956 they created many cavities. Cavities cause movement, even sink holes. On January 15, 1993, Costa Mesa experienced a large sink hole very near the oil property, at Superior and 16th Street. No thorough investigations were made, but there were several theories.

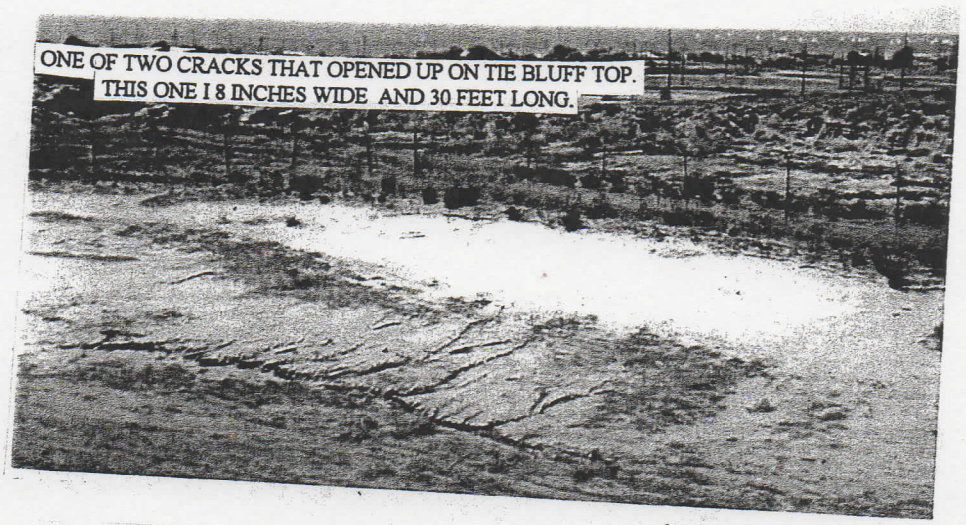
ANOTHER CITY GETS SUED

A city is not required to stabilize a bluff or hillside, but they are responsible to see the builder stabilizes it early in the project. If Banning Ranch is allowed to be developed with all their bluff problems, the safety and welfare of future buyers are at risk. A buyer must be given a full disclosure of the risks he takes. If not, it just presents another liability to be settled in court.

There appears to be no time limits or Deep Pockets defendants.

A BANNING BLUFF

Crack opened overnight May or June, 1993
Size: 18" wide and 30' long



ONE OF TWO CRACKS THAT OPENED UP ON TIE BLUFF TOP. THIS ONE I 8 INCHES WIDE AND 30 FEET LONG.

GENERAL INFORMATION

1. The above crack prox. 40 feet from edge.
2. The above crack prox. 25 feet to our border.
3. A second crack in 1995, smaller and to the right.
4. Our units were getting cracks and strange noises.
5. Other photos available, show other unit problems. Also photos of an older well site before removal at the base of our bluff top.

LOS ANGELES TIMES
R/ TUESDAY, JANUARY 19, 1993 **B5**

Laguna Beach engineering geologist Fred Pratley has been studying hillsides in the county for 30 years and has watched how heavy rains can cause mudslides and landslides that undermine buildings. After this weekend's storms, Pratley surveyed the damage to a group of houses on a Laguna Beach hillside where one home burned and another family was evacuated. Pratley answers often-asked questions about the stability of local hills and canyons.

Q: What makes a hillside unstable?

A: The presence of clay and high ground-water levels. That's oversimplified, but those two guys are dangerous. If you have clay units interspersed with bedrock, you have an unstable potential. But the water is really the culprit. Basically, it is water that causes these slides. That's the bottom line.

Q: What are the warning signs homeowners should look for?

A: Look at openings in the walls, such as doors and windows. They should be symmetrical. If they start to stick, it might be swelling from the rain, but it could be the shape of the wall. Check to see if the frames are symmetrical and if there are cracks that weren't there two weeks ago. If so, that might imply that you have movement in the foundation or movement in the material on which the foundation rests. Other clues are tension cracks in wet soils. This means the soil has moved, and it may reflect [that] the bedrock underneath is also creeping.

LAND SOIL MOVEMENT

GREENVILLE BANNING disaster 1991 borders this project. Excavating unstable soil, believed the culprit.

LOS ANGELES TIMES — TUESDAY, DECEMBER 24, 1991 B3

COSTA MESA

Project Blamed for Damage to Homes

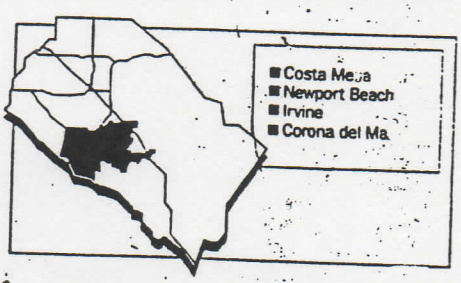
Lori Costa was awakened one night recently by "huge popping sounds like a hot water heater." When she got up to seek the source of the mysterious noise, she saw the Italian ceramic tiles that adorn her home cracking before her eyes.

Costa later conferred with neighbors and found that they were experiencing similar troubles—cracked pools, fences, floors, kitchen walls and cement foundations.

Last week, Costa and 10 other homeowners filed a lawsuit in Orange County Superior Court against several government agencies demanding compensation for the damage in their North Mesa Verde homes, which they contend have been severely damaged by construction of the nearby Greenville-Banning Flood Control Channel along the Santa Ana River.

"My patio is cracked in half," Costa said. "The concrete foundation of my house is crumbling and my walls are coming apart. They don't even touch any more."

The claim names the County of Orange Environmental Agency, the Orange County Flood Control District, Orange County Sanitation District and the city of Costa Mesa. The $10-million Greenville-Banning project began in April and is scheduled to be complete in mid-1993. It is the first phase of the decade-long, $1.4 billion public works improvement plan.



(link between the damage and the project has been established.

"It's hard to say why [the tiles] cracked," said Medeiros. "Some of the homes are quite a ways away from the project."

Fullerton attorneys Warren B. Wimer and Randall J. Friend said the 11 homeowners first noticed damage during the summer, when large amounts of soil were moved to widen the walls of the channel, which is within several blocks of their clients' homes.

"Some of these homes are not even marketable at this point," said Friend. The 11 homes, on New Hampshire, Europa and Sandpiper drives and Iowa Street, have market values ranging from $260,000 to $600,000, he said.

Costa, who bought her house a year ago, said if she had known about the construction project, she would not have bought the $350,000 home.

"My home insurance does not cover damages from land soil movement," she said. "I could never sell it in this condition. Now I stand to lose everything because [the agencies] decided to dig behind my house and be negligent. I put every dime of my life savings into this house."

—DONNETTE DUNBAR and LISA MASCARO

Their Attorney R.J. Friend Reported Homeowners won their case

AT LEAST 63 INHABITED COASTAL HILLSIDES GAVE WAY THIS LAST YEAR. STATE DIVISION OF MINES AND GEOLOGY.

(LA TIMES 12/27/98 SECTION B)

B
WEDNESDAY
JULY 21, 1993, CCt
ORANGE COUNTY

lide Claims Against 2 Cities Flood City Halls

amages: Homeowners in Dana Point and San Clemente have anded millions of dollars from their towns in the legal actions t keep the door open for later lawsuits. Cities deny liability.

Los Angeles Times

EN HALL
STAFF WRITER

NA POINT—The cities of Dana Point San Clemente have been flooded with s filed in the past week by homeown- emanding millions of dollars in dam- and alleging that the cities were responsible for the massive Febru- ndslide that claimed five oceanfront s and threatens others.

a Point alone was hit with 29 claims, ling 18 that ask for damages in excess nillion each, said Andy Anderson, the emergency services coordinator.

San Clemente City Atty. Jeffrey M. Oderman said Tuesday that his city also received a number of claims from homeowners, although he did not know how many.

Officials in both communities called the devastating slide unfortunate, but said the cities are not to blame. The Feb. 22 slide destroyed five bluff-top homes along La Ventana, endangered 45 others and has left a 30-foot pile of rubble covering a vital one-mile stretch of Pacific Coast Highway, which remains closed to all traffic.

The bluff overlooking the highway is in San Clemente, while beachfront property below, as well as the highway and adjacent Santa Fe railroad tracks are within the city limits of Dana Point.

Anderson said the bluffs in the slide area were an accident waiting to happen. "The geologic structure of the slope was prone to failure," he said.

The claims, many of them filed through the office of San Diego attorney Patrick E. Catalano, suggest that the cities "failed to adequately investigate the condition of the hillside" and installed water systems that leaked into the soil and contributed to the slide.

Oderman, San Clemente's attorney, said the slide was caused in large part by excessive rain last winter. The city has tested water and sewer lines on the bluff tops for leaks and found them functioning properly.

"It's an unfortunate situation, but not one the city feels it has a legal liability for," Oderman said.

The claims were filed this past week to preserve their legal rights to file damage suits in the future, homeowners said. By law, homeowners have six months from a slide date to file a claim or not have any legal recourse later, Anderson said.

Nat Rogers, a San Clemente homeowner whose property sits atop the La Ventana bluff but was not directly damaged, praised the work the cities have undertaken since the slide. But he was forced to file a claim to protect himself and his property values, he said.

"With a deadline of six months, you either file or you are a fool," said Rogers, who has lived on the bluff for 17 years. "We feel the cities have been wonderful and ought to be commended. All the agencies are working very hard not to have any lawsuits occur."

The landslide, which began along the

Continued from B1

bluff's edge, spilled 75 feet down the hillside and across Coast Highway and the railroad tracks, temporarily halting all commuter and freight se e to San Diego.

The tracks have since been cleared, but the cities are still awaiting a final engineering plan and funding from the Federal Highway Administration to clear the highway, which is a vital evacuation route for the San Onofre Nuclear Generating Station.

The homeowners met with city, federal, state and Caltrans representatives Monday at Dana Point City Hall to discuss the progress on the project, said James F. Holloway, San Clemente's director of community development. Federal funds will be used to clear the highway, but the homeowners will have to come up with some of their own money to restore their properties, Holloway said.

"Under federal guidelines, the mission is to clear the road and make it safe," Holloway said. "But that doesn't mean building back private property for the sake of building back private property."

Holloway said the claims were discussed at the meeting "more or less as an aside." Most of the residents were just protecting themselves by filing claims, Holloway said.

"I understand where they are coming from if they have done this to protect their rights down the line," Holloway said.

Holloway said the cities and the other agencies have two plans to restore the bluffs using a combination of retaining walls and underground cables. He declined to estimate a cost, but said it would probably be less than the $2.8 million price tag suggested last month.

"It's a very complicated deal," Holloway said. "All the solutions turned out to be less than the original estimates. But there is still a gap between the preferred solution and what the federal funding would provide. We still need to figure out how to fill that gap."

Geological Evaluation of
Faulting Potential
West Newport Oil Field,
Orange County, California

THE EARTH TECHNOLOGY CORPORATION
Paul Guptill
Paul Guptill
Senior Engineering Geologist
C.E.G. 1081

Date: July 31, 1986
Project No.: 86-820-01

Marc Egli
Project Geologist

FAULTS (SECTIONS 2.1 2.3 4.2)

2.1 Objectives

The principal objectives of our geologic investigation were to characterize the nature of apparent faulting on West Newport Mesa, to delineate individual fault traces, to interpret the origin and significance of fault traces, and to estimate the age of latest fault movement.

The site is presently a producing oil field. Operation of the oil field began in 1943, and since that time many modifications to the natural surface have resulted from oil field operations. Foremost among these modifications are road and drilling pad excavations, surface and subsurface pipelines and asphalt slope protection of the mesa bluff face. A deep road cut was excavated in the 1960's in a north-south trend along the eastern side of the study area as a possible extension of Balboa Boulevard. This cut is particularly useful for interpreting geologic relations on site. In this report, it is referred to as the Balboa Boulevard cut

2.3 Previous Investigations

Previous investigations at the West Newport mesa had identified evidence of faulting at and near the W.N.O.C. property. Guptill and Heath (1981) reported offset soils at the mesa as well as one location where man-made fill appeared to be involved in faulting. R. Miller, of the California Division of Mines and Geology, also mapped displacements in the mesa sediments along the Santa Ana River and at the road cut along Superior Avenue (personal communication, 1986).. For this report, we have interpreted subsurface faults to be related to the mesa faulting.

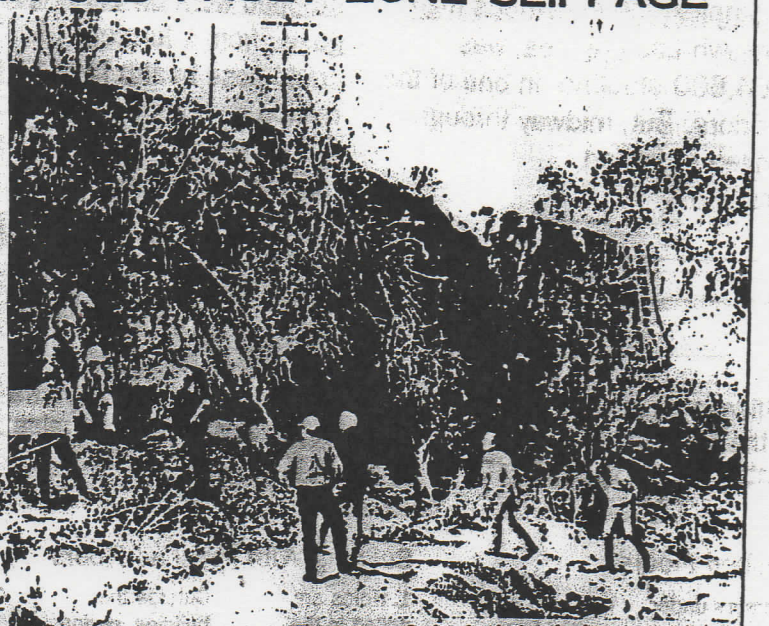
4.2 During our field investigation we identified numerous near-surface faults in the mesa escarpment along Balboa Boulevard and in trenches associated with the North Branch Splay fault. Faults were easily identifiable because the sediments are well-bedded The majority of these faults are normal faults with less than 6 inches of apparent dip separation in late Pleistocene sediments. Some faults were mapped, however, that have displacements as great as 2 to 3 feet.

LA Times DEC 18/97 Page A3

CLIFF AREA DEEMED HAZARDESS.
IN OLD FAULT ZONE•SLIPPAGE

Geologists Say Simi Fault May Be Active

■ **Geology:** Researchers believe quake occurred there between 1,200 and 8,000 years ago, which means another one is possible.



Lettis and fellow geologists Chris Hitchcock and Jerome A. Treiman unveiled their preliminary findings to other scientists, consultants, and local and state government officials Wednesday.

So far, Lettis said, it looks as though the Simi fault could generate an earthquake with a maximum magnitude somewhere between 6.5 and 7.0. He also believes the fault is "slipping" at a rate between one-half millimeter to a millimeter a year.

Indeed, if the fault meets state activity criteria, geologists would draw up an earthquake fault zone map marking 500-foot buffers on either side of the shear. After about a year of review by the public and other geologists, that map would influence development and property sales around the fault.

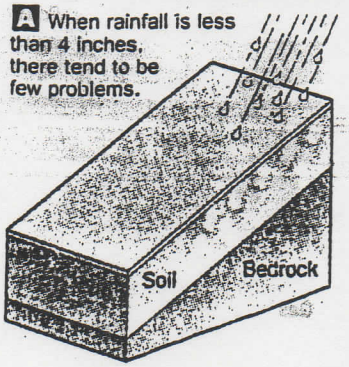
Photos by MEL MELCON / Los Angeles Times

Geologists study fault in the Arroyo Simi in northwest Simi Valley. State will decide whether to zone it as active.

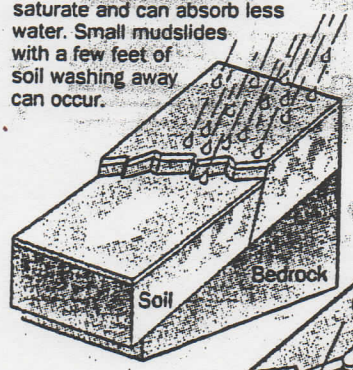
Saturating the Soil

Heavy rains can cause street flooding and minor mudslides, but a longer-term problem occurs when the soil gets oversaturated. Here is a look at what can happen during the rainy season from December through March:

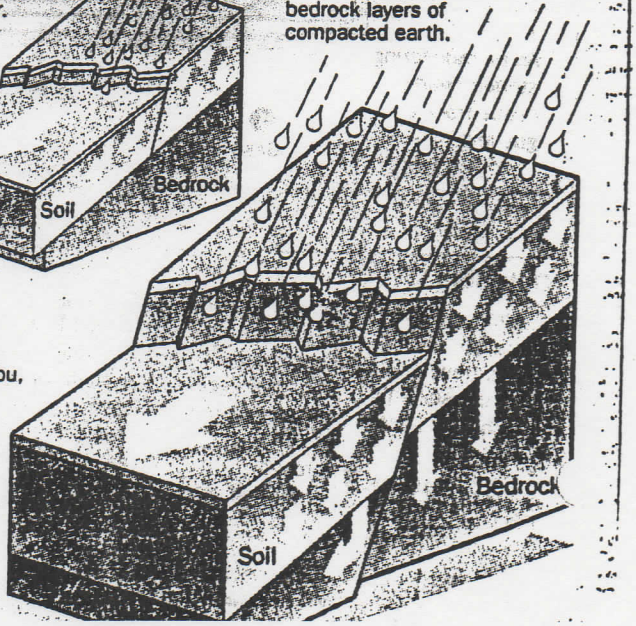
A When rainfall is less than 4 inches, there tend to be few problems.



B With rainfall of 6 to 10 inches, soil begins to saturate and can absorb less water. Small mudslides with a few feet of soil washing away can occur.



C With more than 10 inches, real problems begin. These include large mudslides during the storms and, later in the year, the chance of massive landslides as water undermines bedrock layers of compacted earth.



The Worst Case

A major long-term risk of saturated soil is that it will be weakened and later give way.

- In some areas of the Southland—especially in coastal places such as Pacific Palisades, Malibu, the Palos Verdes Peninsula and Laguna Beach—the underlying bedrock is not the usual granite but compacted earth.
- Heavy rainfall during the winter can seep into this weaker type of bedrock.
- The seepage can loosen the soil.
- In the fall, minor rains can make the weakened area vulnerable to a big slide.

January, 1992

Prepared for:

City of Newport Beach
Planning Department
3300 Newport Boulevard
Newport Beach, CA 92663-3884

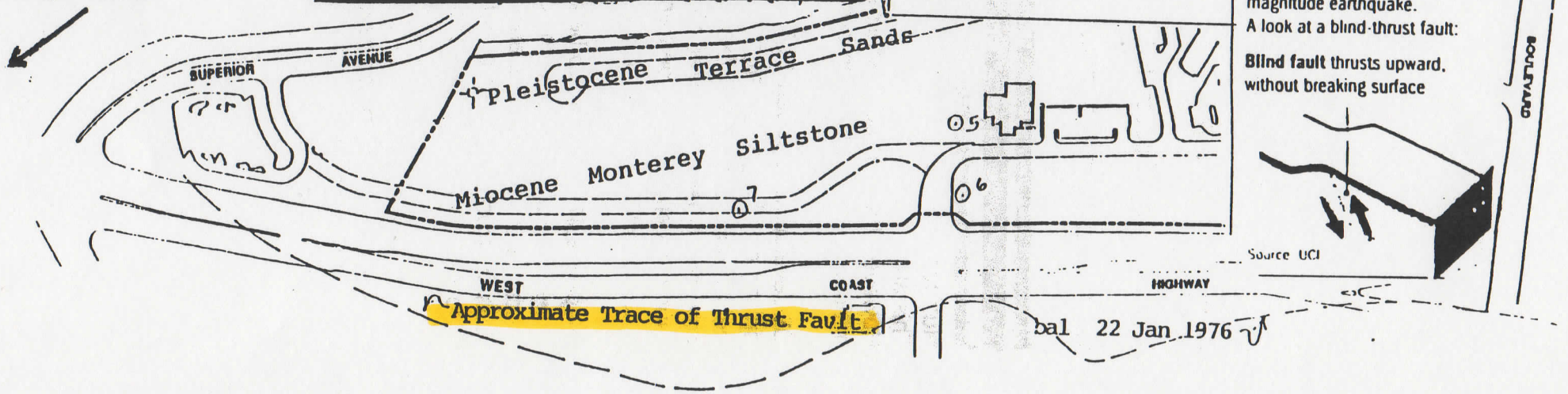
Contact Person: Patricia Temple
(714) 644-3225

Prepared by:

LSA Associates, Inc.
1 Park Plaza, Suite 500
Irvine, California 92714
(714) 553-0666

SUPPLEMENTAL DRAFT
ENVIRONMENTAL IMPACT REPORT
NO. 142 FOR
HOAG HOSPITAL MASTER PLAN
SCH #89061429

Underlying Thrust Faults are a potential threat in any area : Steve Walter, Seismologist, U.S. Geological Survey 1998.

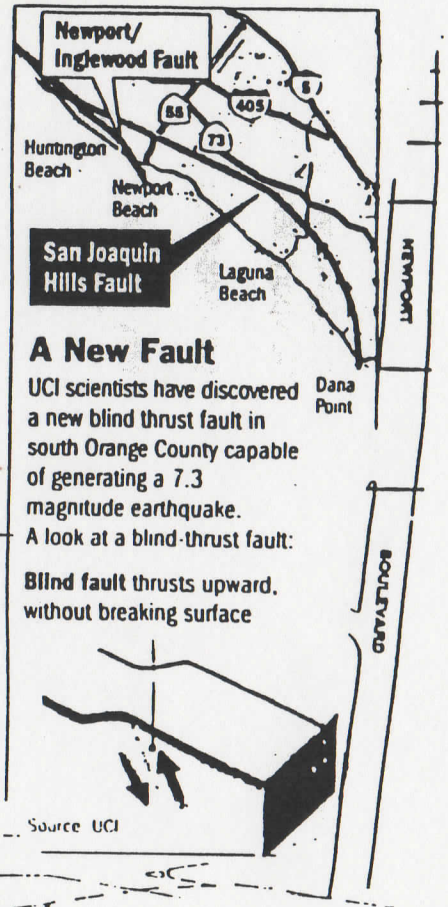


Los Angeles Times MONDAY, NOVEMBER 1, 1999 B13 R

Report on New Fault

The work has been recognized as important because it helps understand more about a fault that was not known to have existed. Recent earthquakes, including the Hector Mine earthquake and the Northridge temblor, emanated from previously unidentified faults.

"Prior to this work, most people considered the Newport-Inglewood to be the principal source of seismic activity in Orange County," said Tom Rockwell, geology group leader at the Southern California Earthquake Center. "One possible outcome of this research is that there are other blind thrust faults that we do not know about in the area."



CONSTRUCTION HISTORY

Geology Notes added 1/92 NINYO & MOORE

HOAG MEMORIAL HOSPITAL PRESBYTERIAN

CALIFORNIA COASTAL COMMISSION

STATEWIDE INTERPRETIVE GUIDELINES

AS OF DECEMBER 16, 1981

Call this to city people

GEOLOGIC STABILITY OF BLUFFTOP DEVELOPMENT

(Adopted 5/3/77)

Section 30253 of the 1976 Coastal Act provides that "New development shall: (1) Minimize risks to life and property in areas of high geologic, flood and fire hazard; (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs". Section 30251 provides that: "Permitted development shall be sited and designed...to minimize the alteration of natural landforms..." Alteration of cliffs and bluff tops, faces, or bases by excavation or other means should be minimized. Cliff retaining wall should be allowed only to stabilize slopes.

-3-

The applicant for a permit for blufftop development should be required to demonstrate that the area of demonstration is stable for development and that the development will not create a geologic hazard or diminish the stability of the area. The applicant should file a report evaluating the geologic conditions of the site and the effect of the development prepared by a registered geologist or professional civil engineer with expertise in soils or foundation engineering, or by a certified engineering geologist.

(1) cliff geometry and site topography, extending the surveying work beyond the site as needed to depict unusual geomorphic conditions that might affect the site;

(2) historic, current and forseeable cliff erosion, including investigation of recorded land surveys and tax assessment records in addition to the use of historic maps and photographs where available and possible changes in shore configuration and sand transport;

(3) geologic conditions, including soil, sediment and rock types and characteristics in addition to structural features, such as bedding, joints, and faults;

(4) evidence of past or potential landslide conditions, the implications of such conditions for the proposed development, and the potential effects of the development on landslide activity;

(5) impact of construction activity on the stability of the site and adjacent area;

(6) ground and surface water conditions and variations, including hydrologic changes caused by the development (i.e. introduction of sewage effluent and irrigation water to the ground water system; alterations in surface drainage);

(7) potential erodibility of site and mitigating measures to be used to ensure minimized erosion problems during and after construction (i.e. landscaping and drainage design);

(8) potential effects of seismic forces resulting from a maximum credible earthquake;