

MALCOLM DOUGHERTY

Mr. Chairman, senators ... good morning ... thank you for convening this informational hearing.

I welcome this opportunity to discuss the peer-review oversight process by which Caltrans maintains its position as a global leader in seismic safety.

I also extend my gratitude to your committee staff for their preparation of this hearing. I appreciate Mr. Bauer's conscientiousness, and the courtesy and professionalism he has afforded the members of my team.

Peer review – the formalized practice of seeking expert advice – is a 'best practice' across the scientific spectrum. Good science, and – in the case of Caltrans – good engineering, depends on consultation with, and review by, experts who are not part of the task at hand.

Peer review, in simplest terms, is the act of seeking a second, third and fourth opinion ... a way to get fresh eyes on a problem.

California, of course, has among the finest systems of seismic review on the planet, and it is no coincidence that we rely on much of the same expertise, and in some cases, the same experts, as other sophisticated nations.

The expertise and experience represented on our panels, is in demand worldwide. We are, plainly put, fortunate to have access to them.

But Caltrans reliance on expert review is not limited to megaprojects or seismic issues. In recent years, for example, we convened a peer-review panel to limit damage to salmonid populations during bridge work in Marin and Contra Costa counties.

As you are undoubtedly aware, the health of the salmonid population has a direct bearing on fisheries, and by extension on the economies of coastal communities and Native populations that are dependent on commercial and sport fishing.

A reduction in the population of that particular fish species means unemployment and localized recession for communities in which fishing is a major economic activity.

So, Caltrans convened a panel, in cooperation with the Department of Fish and Game, to ensure that our construction activity was conducted in such a way as to minimize damage to this crucial indicator species.

Peer review, as I said, is a best practice.

And while seismic concerns have been at the forefront of engineering endeavors in California for more than a century, the formalized system of seismic peer review, as we know it today, did not take shape until after the 1989 Loma Prieta Earthquake.

In the aftermath of that devastating event, then-Gov. George Deukmejian ordered a thorough assessment of risk, and gathered the best science available on seismic safety. He considered it a ‘race against time,’ which was the name he gave to his original report ... a document that drives our efforts to this day.

Seismic peer review was a linchpin of the governor’s vision for constant improvement of the safety our highway system.

From that original Board of Inquiry, Caltrans was ordered to convene a permanent, statewide panel: the eight-member Seismic Advisory Board ... and, further, to convene experts on an ad hoc basis, to advise structural design engineers on specific projects. It is this latter gathering of experts that we now refer to as our seismic peer review panels.

Members of the Seismic Advisory Board, and peer review panels, provide the very detailed expertise needed to surmount an ever-changing set of challenges in order that we can deliver the highest level of safety to California’s residents and its economic arteries.

Their contributions to safety are, it is worth pointing out, not limited to California.

A member of our peer-review panel, for example, was one of only four Americans called to China for an international discourse on bridge and tunnel engineering.

Likewise, when Minnesota state officials sought expertise following the collapse of the I-35W bridge, they looked to a member of our panel.

The Japanese government did the same after the dreadful Kobe quake and tsunami.

Members of these panels – as I said – are leaders in their field. They are not volunteers. They are sought-after professionals in high demand. We contract for their services. They scrutinize very detailed plans and procedures. They are, without risk of exaggeration, the best and the brightest.

Your background report notes that when Congress had concerns about the efforts of peer-review panels around the nation, they turned to the National Academy of Sciences for reassurance. I think they could not have chosen a better source for expertise, and that's why I am proud to report that three of the four members of our current peer-review panel are, in fact, members of the National Academy of Sciences – a rare achievement for engineers.

Let me simply reiterate: the people who review our plans and scrutinize our processes, are among the those who advise the federal government on *its* most challenging and fundamental engineering and scientific inquiries.

The totality of those facts should instill a great level of confidence in their work.

Selections to the Seismic Advisory Board were originally made by Caltrans' Chief Bridge Engineer, and the original members included some of the representatives who served on the Gov. Deukmejian's original Board of Inquiry. Subsequent members have been appointed by the department as vacancies occurred.

While seismic peer review panels primarily scrutinize the design of structures, expert oversight does not necessarily end when construction begins. In the case of the San Francisco-Oakland Bay Bridge, for example, the peer-review panel has guided us through a series of challenges. The benefit we have derived is there in concrete and steel ... the bridge has recently crossed the impressive milestone of load-transfer, which means the tower, its cables and strands are holding itself aloft. We are in the process now of removing the supports that had initially carried that load.

Let me pause to make a distinction: No peer review panel makes day-to-day decisions for the department, nor should it be suggested that they are stand-ins for the state's bridge designers, nor engineers-of-record.

They meet, on average, quarterly, to develop and maintain a detailed familiarity with the highly technical attributes of the projects under their purview. This occurs, in a manner similar to a financial audit, with a degree of separation and confidentiality, in order to provide the most candid and critical assessments possible.

As the American Society of Civil Engineers puts it, in a report entitled “Quality in the Constructed Project” published earlier this year, and I’m quoting now: “The confidential nature of these interviews aids in the eliciting of candid observations.”

Unanimity of opinion is not the goal, nor is it the common result. Fierce scrutiny is the goal, and impartial guidance is the result.

This work is conducted at the nexus of the theoretical and the experiential; these panels are not the place to gain experience, but rather to offer the benefit of that experience.

And we take their advice seriously. When the peer review panel raised concerns about replacement of the west approach to the Bay Bridge, Caltrans halted construction, revised its design, and did not resume until the panel’s concerns were adequately addressed.

Having said that, I want to address what your background report suggests is an inadequate level of transparency in this process.

I welcome that conversation. It is, I think, a natural part of the evolving relationship between Californians and their government.

Advances in information technology ... the so-called I-T revolution ... is creating new expectations of access to shared knowledge. The world is increasingly transparent, and our peer review system can be no exception.

This committee, senator, has brought that into keen focus ... not only to us, but to our mutual partner in government transparency, the Fair Political Practices Commission.

The commission has developed new Conflict of Interest regulations with Caltrans' peer review panels in mind.

The formal process of promulgating these new regulations is nearly complete. In just a matter of weeks, members of our peer review panels will file newly defined financial interest reports. Like all FPPC reports, they will be available to the public.

Caltrans also is committed to providing more timely and more easily accessible information about the state's seismic peer review panels, about the credentials and histories of those we have selected. Likewise, as you have suggested, we will commit to providing public documentation of the meetings of our seismic peer review panels.

I welcome your input on the best way to accomplish that, and expect it will be part of the discussions to begin shortly.

With me is Dr. Brian Maroney, the Chief Bridge Engineer for the Toll Bridge Program. He can speak on a very detailed level on questions you may have about the specific activities of the peer review panels.