

Committee on Resources

Witness Testimony

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January 1997 San Joaquin River Flooding, Levees,

Habitat, Endangered Species Act and HR 478

The January 1997 floods along the Lower San Joaquin River have like most floods raised a large number of issues and questions. The typical question presented is quite simple. Why did the levee break and who is at fault? The question which we believe is most relevant is what can be done to reduce the risk of future flooding?

Flood control in general and levee construction and maintenance in particular involve risks. There are no fail proof flood control systems or levees. Prediction of future climatic conditions, earthquakes and other natural occurrences are based on the recorded or experienced incidents of the relatively recent historical period and are in reality a justified speculation. Predictions of future regulatory constraints, land use planning decisions and financial impediments have proven to be even more speculative. Most of the levees in the Lower San Joaquin River area were designed and constructed many years ago based on numerous assumptions which although reasonable at the time are no longer valid. Land use changes and the tremendous damage associated with flooding has also changed our attitudes with regard to the desired degree of flood protection. "50 year" protection for agricultural areas and "100 year" protection for urban areas is no longer viewed as sufficient. The general consensus appears to be that the present level of flood protection is not adequate.

Many of the suggested alternatives for improving flood protection such as levee setbacks, flood bypasses, flood retention basins, dams and flood control channels will be costly and will take many years to implement.

Among the "non-structural" alternatives which could provide an immediate increase in flood protection is the reduction of regulatory constraints on maintenance and incidental improvement of the existing levees and flood control channels.

While we are supportive of protection of our rivers and bays and the fish and wildlife therein, we believe it is unwise to require that vegetative habitat be maintained and propagated on levees and in flood channels which were not designed or built to accommodate such habitat.

In our view, the critical portions of a levee are 1) its structural cross-section consisting of the mass of earth and stone necessary to hold back the forces exerted by the water and to stop the flow of water over or through the levee; 2) the levee crown which is essential for access for inspection, emergency response and repair, and 3) the waterside and landside slopes on which the recurring floodfight and repairs must be conducted to protect and maintain the structural cross-section and levee crown. These critical portions of a levee should essentially be free of brush, shrubs, vines and trees. Such vegetation obstructs inspection or so greatly adds to the cost that adequate inspection is practically impossible. More importantly, such vegetation obstructs the placement of floodfight materials such as tarps, plastic and sandbags and must be removed at

the time of the emergency floodfight. The portion above the waterline can usually be removed but consumes time and manpower when both are critically limited. The vegetation under the water is extremely difficult to remove and practically speaking simply precludes the placement of tarps and plastic below the water level.

Some trees and bushes have roots which penetrate the structural cross-section of the levee, thereby creating a path for rodent burrows and/or the passage of water. If such a tree or bush dies, the roots rot and a hole is left within the levee. Large trees and bushes can topple over during storms and floods, thereby resulting in large cavities within the critical portion of the levee. Trees and bushes harbor burrowing rodents such as beaver, muskrat and squirrels and some constitute a food source for such animals.

Trees and bushes in the flood channels obstruct the free flow of flood waters, thereby raising the upstream flood stage. Detrimental changes in the velocity and direction of currents could also result.

The problem is not static. Trees and bushes get larger each year, the roots extend and new plants are propagated. The additional flood risk associated with such vegetation on the levee and in the flood channels is increasing with time.

The authorization to remove such vegetation during an emergency does not eliminate the risk. As explained above, it takes time to remove the vegetation and the vegetation under the water cannot practically be removed. Additionally, the emergency work takes place only on limited portions of the various levee systems, thereby leaving large amounts of the detrimental vegetation undisturbed.

There are a number of State and Federal laws which have in recent years been used to limit or prohibit the control and removal of damaging vegetation on levees. The Federal Endangered Species Act is one of such laws. In our view, the Federal Endangered Species Act has been rigidly applied to levees and flood control channels in an unreasonable manner. The levees when originally constructed were without vegetation of any kind. They were designed and built to provide flood control, not habitat.

It was clear from the start that constant maintenance would be required and that vegetation would have to be regularly controlled and removed. Plants including those such as elderberry bushes started growing on the constructed mounds of earth constituting the levees and most likely would not exist were it not for the levee. If the levee breaks in the vicinity, the elderberry bush will likely be washed away and destroyed. Even those elderberry bushes not on the levee but in the area of flooding could be destroyed. In the San Joaquin River area, there are large numbers of elderberry bushes and their general protection as habitat for a limited number of endangered elderberry beetles is viewed by many as an abuse of the Endangered Species Act. Another example of Endangered Species Act concern is the prohibition of dredging and placement of fill for levee maintenance and the creation of shaded riverine aquatic or emergent marsh habitat in areas designated as critical habitat for Delta smelt. It would appear that it will be a very long time before there will ever be enough data on smelt distribution or habitat utilization to conclusively support or deny projects.

The critical importance of maintaining the existing levees is not debated yet such maintenance is being obstructed. Once constructed, a levee system must be maintained. In most cases, maintenance is a legal mandate for a governmental entity. The failure to maintain could in all cases lead to litigation and liability for damages. The "after the fact" application of constraints on maintenance of existing facilities is grossly unfair.

All operations relating to levees and flood control channels are constrained financially. Many local agencies are dependent upon assessments of only agricultural lands or impoverished developed areas where the

ability to pay is quite limited. All local agencies in California are legally limited from increasing assessments without "voter approval". State and Federal agencies are also severely constrained due to budgetary limits and the condition of the economy. Even emergency response is financially constrained. State and Federal Disaster assistance is becoming more and more limited and subject to ever-increasing conditions.

The money spent on habitat assessments, consultations, pruning vegetation, more difficult inspection, mitigation and emergency removal is money which should go towards reducing the flood risk. Emergency removal is usually with hand labor and at times when weather conditions are poor, thereby resulting in costs much higher than would be required if removal or control was part of routine maintenance. Aside from the negatives for flood control, there is also a negative on the environmental side in that the investment of regulatory costs is in the protection of habitat which must be periodically destroyed.

It does not make good sense to have our limited environmental dollars working against our limited flood control dollars. The primary purpose of levees and flood control channels should be flood control. The habitat should be protected and enhanced in areas off of the critical levee areas and in those areas of the channels where the flood flows are not detrimentally altered.

This does not mean that there will be no habitat along our levees and flood channels. In our area the levees and channels are not uniform. There are substantial areas where there are waterside berms, channel islands and enlarged channels where habitat can be maintained and enhanced without increasing the flood risk. There are also opportunities to create additional waterside berm areas to support additional habitat.

We support the passage of HR 478 as an important step in correcting an unreasonable and unjustified conflict between habitat protection and flood control.

We also support removing the regulatory threat on private landowners to encourage voluntary preservation and propagation of off-levee habitat and believe the "safe harbor" approach is a step in the right direction.

If critical habitat is not sufficiently available by way of the less onerous approaches, then public dollars should be used to acquire and propagate such habitat in areas where there is no conflict with other critically important public interests.

Approved by Directors March 11, 1997.

Dated: _____

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