

CHAPTER XIX  
COALINGA, CALIFORNIA

Background

Coalinga is a small, rural community (population about 7,000) located in southwestern Fresno County in the western part of the San Joaquin Valley. Fresno, the county seat, is 65 miles away. The community served as a railroad coaling station, hence its name, Coaling (Station) A. Later, the city was the center for oil exploration in the area. More recently, construction of the California Water Project (a major irrigation project in the state) has contributed directly to the expansion of agricultural activity into the west side of the valley and indirectly to Coalinga as a commercial center.

On May 2, 1983, an earthquake measuring 6.7 on the Richter scale hit about 9.5 miles northeast of the city of Coalinga, causing damage in a 25-mile radius. According to the expert team of the Earthquake Engineering Research Institute, no foreshocks greater than 1.5 had been observed on University of California seismographs. The May 2 earthquake had a mean Richter magnitude of 6.7 and a maximum Modified Mercalli intensity of VIII. The two largest aftershocks were 3 minutes ( $M_L$  5.6) and 80 days ( $M_L$  6.0) later. Although the main earthquake was of only moderate magnitude, ground motion was perceptible 200 miles to the north and south, in San Francisco and Los Angeles. The May 2 earthquake and its aftershocks were in the eastern Diablo Range, about 18.5 miles northeast of the San Andreas Fault. The location and nature of this fault caught even local geologists by surprise.

In seconds, the earthquake of May 2 devastated Coalinga's central business district. Coalinga was the only community to suffer serious damage from the earthquake. While there were no deaths, 47 people were

injured. Nearly 2,000 homes and about 200 businesses were damaged. The central business district suffered almost total devastation because it contained many unreinforced masonry buildings. The downtown streets were impassable, water mains were broken, telephone service was disrupted, communications towers collapsed, the city's gas distribution and electric systems were shut off, and sewer lines collapsed. The total damage was estimated at \$31 million, including almost \$6 million damage to local public facilities.

Coalinga is relatively isolated; the nearest town is 17 miles away, and the nearest large city is 50 miles away, in another county. Since the effects of the earthquake were felt mainly in Coalinga, no other city had need of emergency resources. Neighboring communities and the Fresno County government quickly marshalled their resources to help Coalinga. Further, the highways that lead to Coalinga were not seriously damaged, so land transportation was not disrupted. Other local ambulance services and fire departments assisted the city. The County Sheriff's Department set up a command post in Coalinga within an hour of hearing about the earthquake.

Coalinga's local economy comprises oil drilling and related services (about 50%), agriculture (about 30%) and retail sales and services (about 20%). All three sectors sustained damage. This diversified economic base, while growing relatively slowly, is steady. At the time of the quake, the city had a small surplus of funds, due mainly to utilities income. In addition to providing the usual municipal services, the city also provides gas, water and sewer services to its homes and businesses.

#### Local Response

The sudden onset of the earthquake and the lack of local preparedness resulted in many problems. Several of the major problems

in the aftermath of the May 2 earthquake are documented in a report to the California Seismic Safety Commission, published about one month after the disaster:

- 1) Although Coalinga had an emergency plan, the plan was considered impractical and not followed. . . . Lack of a practical emergency plan, and prior exercise of that plan, precluded optimum emergency response.
- 2) A second, extremely serious problem was the lack of adequate communications. Telephones generally were inoperative and the city repeater on a nearby hill stopped functioning. City radio communications became limited to vehicle-to-vehicle, although some use was made of CB radios. Fire units could talk to other fire units on a limited basis and law enforcement . . . could talk to law enforcement . . . on a limited basis, but there was absolutely no communications system Direction and Control could use to effectively coordinate the use of the available resources. . . .
- 3) There were no previously designated alternate Emergency Operation Center (EOC) sites. After the decision was made that neither the fire station nor the police station could be used as an EOC, considerable confusion existed as to what to do. Approximately two hours after the initial shock, the California Highway Patrol office was selected to be the EOC and Command Post.
- 4) The news media was [sic] an extremely disruptive influence. they frequently hindered response actions in their efforts to obtain camera coverage or to interview rescue workers, city officials, or other response officials.
- 5) Once the decision was made to turn off the natural gas system, the people designated to take the action could not identify which valves to turn to complete the shut-off. When the gas was finally turned off, all electrical power generated through natural gas was lost.
- 6) A major problem was the influx of people into Coalinga (primarily news media, well-intentioned information seekers, and curious sightseers). This took considerable effort to control and actually impeded recovery efforts.
- 7) Since the majority of buildings in the downtown area were considered unsafe, it became a serious problem to keep the businessmen from entering the area while reassuring them that their property was under 24-hour security and that they would be allowed entry at a later time.

Adding to the local response difficulties was the fact that while the City Hall building was intact, the interior furnishings had been tossed about. Many officers were unusable until the contents of book shelves, cabinets, and desks could be cleared from workspace. The Emergency Operating Center finally was established at the California Highway Patrol (CHP) office at the edge of the city, after two earlier choices were ruled out. At the CHP building, access and communications remained intact.

Local officials, reviewing this list of problems about one year after the disaster, view things differently. First, the locality had an emergency plan, prepared in accordance with state guidelines, but it was not practical (and hence not used) for the disaster. Second, local officials did not see the communications breakdown as the "extremely serious problem" noted. One person half-jokingly said, "When the telephone lines went down it was almost a relief." Third, since the town was small, and most agency heads knew what resources they had, they effectively used the resources they had. Similarly, a "quick look around" enabled local leaders to decide on an alternate location for an EOC. In fact, there were several EOCs--the CHP building was headquarters for the city manager, sheriff, fire chief and the CHP. Public Works operated out of City Hall, the county used the Elks Lodge, the Red Cross used the college. Fourth, the local officials did not remember the news media being as disruptive (except at the local hospital) or the influx of curiosity seekers as bothersome as the observers did--thanks to check points on the few roadways into Coalinga. Finally, the perimeter of the badly damaged downtown area was controlled at first by the County Sheriff's Department and later by local officials using rent-a-fence and rent-a-cop. The latter arrangement worked extremely well in the opinion of local officials.

After the quake, the city expected a loss of revenue, but it did not happen. The downtown businesses, which had borne the brunt of the structural damage, had provided only about 12% of the city's sales tax revenues. Because of the great increase in construction-related activities, including contractors seeking local licenses and purchasing building materials locally, revenues increased in the second half of 1983. Overall, municipal revenues were up about 16% over those of the previous year. While funds from federal and state programs have been coming in slowly, the surplus in the city treasury prior to the May 2nd earthquake eased the usual cash flow problem in the aftermath of a disaster. At least in the short-term, the city's budget is not seriously out of balance.

#### Recovery Activities

After the May 2nd earthquake, government officials at all levels **except local** questioned whether the city could and should rebuild. Such indecisiveness about the recovery process did not arise in any of the other case studies. Major uncertainties about existing land uses in an area of high seismic activity are at the root of this indecisiveness. There may be similar uncertainties in connection with other natural hazards, but no parallel has been observed thus far. Among their concerns were 1) the many severe aftershocks; 2) the dearth of insurance coverage on most of the severely damaged structures, private as well as public; and 3) anticipation of a large amount of indebtedness of both home and business owners. Local officials claim they never considered any option other than how to get back to normal as quickly as possible. As weeks went by, local officials and citizens were discouraged by the lack of federal assistance for recovery (especially for small businesses).

Many researchers and other observers who visited Coalinga shortly after the earthquake were initially pessimistic about the community's recovery, "but not the local politicians and bureaucrats," according to local public leaders who reviewed this report about one year later. Nevertheless, this research team observed in March of 1984 that Coalinga was not in danger of becoming a ghost town, although it was in danger of losing its businesses to a location outside of the central downtown area.

In Coalinga, the number of buildings damaged, as compared with the total, was high. Of the approximately \$31 million estimated total damages sustained, about one-fifth were damages to local public facilities. Through FEMA's public assistance program, monies were made available (on a 75% federal/25% local match basis) to aid the city in the repair and reconstruction of public facilities. Yet, in actual fact the local share amounts to more than 25%. The remaining \$25 million in damage was mostly to structures and property not covered by insurance.

The question of insurance coverage seems to have been seriously underestimated in the early months after the disaster. Payments by insurance companies had reached about \$11-12 million dollars about 14 months after the disaster. That amount had added significantly to local property owners' ability to recover. One should keep in mind that Coalinga had a total city budget of \$4.5 million the year before the earthquake. Therefore, the \$31 million damage estimate equals more than half a decade of municipal income.

The almost total loss of the older, unreinforced masonry structures located in the downtown area has been viewed as "instant mitigation." That is to say, most of the structures that could not withstand the shaking from an earthquake showed obvious structural failure. Essentially, the earthquake singled out the older, vulnerable structures

and destroyed them. As a consequence, there were few decisions about reconstruction and possible retrofiting. After the earthquake, the structures standing were the ones most earthquake-resistant; they had been built in conformance with the more recent building code.

According to the California Seismic Safety Commission, about two weeks after the main earthquake the city had: "1) enclosed the damaged area with a chain link fence, 2) begun demolition plans, 3) initiated contract negotiations for demolition, 4) reviewed a design for development of the central business district, 5) initiated negotiations for redevelopment financing with state and federal sources, and 6) decided to incorporate all of its special districts into the redevelopment planning process." The city is using its Regional Plan (General Plan) adopted in 1972 as the basis for land use planning in the redevelopment process and has developed a plan for the reconstruction of the central business district. Among the changes in that plan made after the disaster were the provision of more area for multi-family housing.

At the local level, recovery planning has been led by 1) the city manager (who is also the city engineer); 2) the city's public works director, who as the official responsible for the municipal infrastructure and the utilities handled the DSRs and the effort to restore the utilities; 3) the City Council members, primarily in their roles as directors of the City Council and of the Redevelopment Authority, and 4) the Coalinga Industrial Development Council (CIDC) and Chamber of Commerce, which are spearheading the business sector recovery.

In addition, FEMA and the California Office of Emergency Services brought together federal and state agency officials to meet with city and county officials, social service agency representatives, and

developers. At the federal level, FEMA and SBA officials were key actors in the recovery planning process.

Prior to the disaster, the city had a Redevelopment Authority in place. At that time, the agency had a limited mission, that of focusing on three specific sites for redevelopment in the city. After the disaster, the decision was made--after local consultation with county and district officials--to expand the boundaries of the redevelopment area to cover virtually the entire city and to use the agency to lead the reconstruction and recovery efforts. The advantages of using the redevelopment agency include 1) its powers of eminent domain, 2) its ability to use tax increment financing for construction projects, 3) its usefulness as a vehicle for coordinating the redevelopment, and 4) its appropriateness for receiving federal grant money. With tax increment financing, property tax revenues on any assessed value above that on May 4, 1983, may be used by the redevelopment agency. This mechanism means the county will receive less income, but Fresno County agreed to allow Coalinga to use this mechanism to aid its recovery.

In the postdisaster period, a development and building policy was established by the City Council at the recommendation of the Planning Commission. The buildings that are going up since the earthquake adhere to those new building standards. Occasionally, variances are allowed, such as a waiver for setback.

The sector of the local economy that sustained the most destruction was the retail business community. The merchants located in the nearly totally destroyed central business district were provided with space at the local college gym for a flea-market type operation during the summer months. By fall, when the school term was to begin, the local Chamber of Commerce had managed to raise funds to acquire trailers, which were

rented out at reasonable rates to business owners. The trailers were parked on lots in the central business district.

City and county officials prepared grant applications to several federal agencies for assistance with business relocation. About \$900,000 were secured from the Economic Development Administration (EDA) of the Department of Commerce. The EDA support included about \$600,000 for the two commercial buildings; about \$200,000 for a revolving loan fund; and about \$50,000 for technical assistance. The latter was to be used for technical assistance and a consultant was hired to provide it.

In the two EDA-supported commercial buildings that are planned for the downtown area, rental space will be offered at reasonable rates to merchants who were operating prior to the disaster. Estimated completion date of the buildings is fall of 1984, which will mean about 1.5 years of business disruption for many Coalinga merchants.

One problem that occurred periodically was that the press and groups of citizens assumed that it was the responsibility of the city to rebuild everything as it was. The municipal officials were, in fact, quite limited in what they could do for the local merchants. Indeed, because local merchants paid as little as \$.07 to \$.20 per square foot for commercial space prior to the disaster, finding new locations that were affordable was a difficult task. Very few federal or state programs exist that could assist with the restoration of wrecked commercial enterprises. Many merchants suffered from more than structural losses; some lost furnishings, inventory, and even essential records (such as accounts payable).

Ironically, Coalinga's geographic isolation works in its favor in that patronage of local businesses continued--even through the disruptions--because alternative shopping locations are many miles away.

### Role of Business Community

The Coalinga Industrial development Corporation (CIDC), a non-profit organization dedicated to business and industrial development, emerged to coordinate the private sector's interests in rebuilding the central business district. After a change in leadership (the former president was named to the City Council) and an expansion of its board from 9 to 15 members, the CIDC assumed an active role in promoting business interests during the recovery. The CIDC formed three committees: Business and Industry Attractions, Long-Term Recovery, and Short-Term Recovery. The CIDC also conducted a survey of local needs and a community audit. The CIDC provides a public forum to review design concepts for reconstruction projects.

During the recovery period, two different business philosophies were expressed: one group wants businesses restored to the way they were and wants no or slow growth; a second group sees the disaster as an opportunity to rebuild in a way that will allow for infrastructure extension, business growth, and the attraction of shoppers to Coalinga from surrounding areas. Commercial restoration planning is complicated by the fact that a population of about 7,000 does not provide the "critical mass" necessary to sustain many businesses. Also, as is true in many other cities, businesses are locating in shopping centers outside of the center city.

With assistance from the Fresno County Community Development Department and the State Economic and Business Development Office, the city applied to the federal Economic Development Administration (EDA) for assistance in rebuilding the commercial structures. The CIDC also was involved in the city's grant application.

Local accounts and perceptions vary about why local business relocation plans went from a quick, temporary means of providing

commercial space to the permanent, substantial structures subsidized by the EDA grant for which the bid was accepted in March of 1984. The permanent buildings agreed upon are expected to make space available to existing businesses in the fall of 1984, for a rental cost of 20 cents per square foot--but with a rapid escalation of 35% a year--as compared to the 65 cents per square foot cost in private buildings in Coalinga.

#### Private Sector (Professional)

According to post-action reports provided to the California Seismic Safety Commission, ". . . the mobilization of the volunteer forces was faster and more complete than expected. This was the result of 13 years of work by the Structural Engineers' Association of California, and two years of assistance and coordination by the Seismic Safety Commission's Task Force on Earthquake Preparedness." Local officials cite the Red Cross, Salvation Army, a locally formed Christian Response Group, and private business donors for prompt, voluntary assistance. In addition, much-needed plumbers (100 of them from throughout the valley) volunteered. Additional valuable assistance came from the California Conservation Corps and the Mennonites.

Another important source of assistance was the Pacific Gas and Electric Company (PG&E). Although the city owns the gas utility company within the city limits, PG&E assisted the city (in part under contract and in part voluntarily) in testing all of the gas mains and in restoring service to local homes and businesses. The utility company was very supportive of local recovery efforts.

Other serendipitous offers of help were made to the city. An aerial photography firm offered to take aerial photos needed by the Public Works Department. Ultimately, the company donated services worth about \$20,000 to the city. In addition, major oil companies with local commercial interests donated money to the city. Texaco, for example,

contributed \$10,000. Chevron helped purchase a new ambulance, and Getty helped purchase a new communications system. Much of the cash went to the Red Cross and Salvation Army for disbursement.

### City-County Relations

The earthquake shows the importance of the county government in the immediate response phase. Given the magnitude of the earthquake and the extent of the damage, the small city was overwhelmed. The county provided almost immediate police and other public safety assistance (such as sanitation and health inspectors). Also, two members of the County Board of Supervisors went to Coalinga to see first-hand what was needed, a gesture appreciated by Coalinga officials and residents. When special needs arose, such as for garbage crews to collect debris, other cities in the area provided the city with the requested support. The county and the state provided road clearance equipment. Additionally, the county provided inspection teams; sheriff's inspections was one of the city's greatest needs.

While Coalinga had had some experience with FEMA (after a flood disaster declaration in the spring), and some experience with federal grant writing (with EPA for a new sewage treatment plant), the city officials were not prepared for dealing with a federally declared disaster and the attendant grant writing for a large-scale event. Fresno County assisted the small city in many ways. One of the most notable county actions was the allocation of a disproportionate share of existing program monies, such as CDBG and Housing Assistance and Rehabilitation, for Coalinga. In the recovery planning process, the county, the state economic development agency, and consultants working with the city and county helped identify all possible sources of federal aid the city might pursue to aid its recovery. Regarding the identification task, FEMA had been a big help to the city.

The county assistance was gratefully acknowledged by the city officials. Before the earthquake, many Coalinga residents had long been dissatisfied with Fresno County government; an effort had been made some years ago to secede from Fresno County and form another county. Despite the distance, the city got prompt and generous assistance from the county during the response and recovery phase. City-county relations are probably at an all-time high since the earthquake.

#### City-State Relations

Disaster response assistance was provided by the California Office of Emergency Services, Highway Patrol, National Guard (paid for by the Red Cross), the California Transportation Department, Emergency Medical Services Authority, and California Conservation Corps. The Office of Emergency Services (OES), together with FEMA, coordinated all social service, lending, and regulatory agencies into a one-stop shop, which was helpful to local officials.

While Coalinga did not have the benefit of a federal interagency hazard mitigation team, it did receive some advice and assistance from the California Seismic Safety Commission. A SCEPP Assessment Team visited Coalinga shortly after the earthquake and prepared a Team Report. It is interesting to note their preliminary assessments of the recovery process at that time:

- 1) The emergency response and recovery operations in this earthquake have limited application to catastrophic earthquake events as projected for Southern California.
- 2) This event brought out the significant role played by the county government in the immediate emergency response and recovery phases of major earthquakes. . . .
- 3) Pre-earthquake planning, plan testing and personnel training are critical for effective response and short-term recovery.
- 4) The private sector throughout the county and state responded with great generosity to the situation.

- 5) Coalinga is taking advantage of all its existing plans to speed up the short-term and long-term recovery.
- 6) The recovery process in Coalinga is likely to be prolonged because of the lack of insurance coverage and the resulting dependence on federal disaster assistance programs.
- 7) Initial observations point to the city's need for technical assistance in both the development of a reconstruction and reinvestment plan, using state and federal aid, and in managing the actual reconstruction process.

#### City-Federal Relations

The city was not prepared for either a major earthquake or the massive infusion of help and resources needed during the response and recovery phases. The city, assisted by county and state agencies, prepared an application for a Presidential Disaster Declaration; the county itself later filed for a declaration. FEMA and OES took the lead in obtaining federal assistance for response and recovery activities. County staff helped prepared economic assistance and other grant applications. The city's public works director handled all DSRs for the city.

Shortly after the Presidential Disaster Declaration was received, representatives of federal agencies convened in Coalinga and described the recovery programs available to aid the city. By all local accounts, the promises were extravagant and the ability to deliver limited. This session caused a lot of hard feelings in the ensuing months. A major frustration experienced by local citizens was that while displaced residents could get rent-free trailers, displaced businesses were not eligible for any temporary relocation or rebuilding assistance. Individual businesses were eligible for SBA loans, but no assistance was available for dealing with aggregate business planning or relocation.

Among the federal programs considered for business-related relocation were UDAG, EDA, and Farmers Home Administration. Given the

local preferences, as well as federal program availability, EDA programs provided the most assistance. SBA was the single biggest program.

Local officials remain disgruntled about the lack of delivery by federal agencies and by the limitations of a Presidential Disaster Declaration. The mayor expressed his frustrations in testimony to a U.S. Congress committee, as follows:

The promises fizzled, a few sputtered away but they still went out. Hopes were extinguished. FEMA assistance has never been clear. We believe that it is as follows:

To provide mobile homes, but not the sites for them.

To provide funds to render the devastated area safe, but not to put back together.

To provide assistance in bringing in other federal agencies to assist.

We do not believe this is enough, and we would doubt any Legislator or private citizen would believe that this is what is meant by a Presidential Declaration of a disaster.

#### Interviewers' Perceptions

In Coalinga, the citizens have a conservative philosophy about government and they are extremely independent and self-sufficient--probably because of the relative isolation of the city. Initially, they did not expect assistance from any level of government. In fact, they were reluctant, if not resistant, to accept individual assistance. Special efforts were made to get individuals who were eligible to apply for SBA loans.

Fortunately for the small city, the county was highly supportive in terms of providing emergency services and money from existing program funds (CDBG, home rehabilitation monies). Nevertheless, the extent of damages, the very limited amount of insurance payments, and the relatively limited external resources are among the reasons the recovery is slow in Coalinga.

From the standpoint of physical appearance and infrastructure, Coalinga is better off after the earthquake. The older, unstable, deteriorating structures are gone; the gas system has been carefully checked and brought up to current standards; some additional water and sewer capacity has been put into place, allowing a needed trailer park and providing possible expansion capability to city infrastructure; and, finally, the central business district will be modernized and revitalized.

On the other hand, there will be a high level of indebtedness of both homeowners and business owners for many years to come. The fact that so few losses were covered by insurance means that most of the cost will fall directly on the individuals stricken by the disaster. There remains plenty of emotional devastation as well. About 30 people move out of Coalinga each month (up from an average of 20), even though the total population is increasing.

Earthquake damage is different; it is more difficult and expensive to deal with in that structural damage from a quake may be subtle. After an earthquake, it is necessary to have an engineer doing building inspections to certify occupancy. In Coalinga, the public works director was the only municipal employee qualified to do building inspections--obviously not a good use of his time in the aftermath of an earthquake. The county provided the additional assistance needed.