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## **Bonneau Dickson, P.E.**

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**Consulting Sanitary Engineer**

# **FORENSIC ENGINEERING RESUME**

## **SEWER SYSTEM OVERFLOWS**

### **Bonneau Dickson, P.E.**

Education: Georgia Institute of Technology  
B.S. Civil Engineering -- 1960  
M.S. Sanitary Engineering -- 1964

Harvard University  
M.A. Sanitary Engineering -- 1965

Harvard Business School  
Master of Business Administration -- 1975

Registration: Civil Engineer -- California # 19491

Professional Associations: Water Environment Federation (WEF)  
California Water Environment Association (CWEA)  
American Water Works Association (AWWA)  
National Onsite Water Association (NOWA)  
California Onsite Water Association (COWA)  
Pipe Users Group Of Northern California (PUG)

**San Mateo County.** Sewer Backup into Private Residence. Expert witness in case where a blockage in a sewer caused flooding of and extensive damage to an expensive residence in San Mateo County. Issues included the adequacy of the sewer maintenance program, sags in the existing sewer, the unusual volume of flow, and the requirement for a backflow preventer. Videos from inspections of the sewer were reviewed and the quantity of liquid which reached the house was estimated.

**Flooding of a Home in the Pasadena Area with Sewage.** Technical expert on a case where sewage flooded a private home. Reviewed the response of the City crew to the report of the spill, the City procedures for maintaining the sewer system, and the City's reporting of the incident.

**Sewer Design Standard of Care.** Expert witness on a case involving delay claims caused by problems with the design of the sewer system for a large apartment complex. Prepared a certificate for use in filing suit against the design engineer.

**San Mateo County.** Sewer Backup into an Athletic Club. Expert witness in a case where the mechanical rooms of an athletic club in Northern California were flooded when a City sewage pump station failed. Issues involved whether the level of operation and maintenance of the pump station was within the Standard of Care, Uniform Plumbing Code requirements for the vent piping at the athletic club, and the adequacy of the drawings from which the mechanical rooms were built.

**Los Angeles Area.** Sewer Backup Through a Backflow Prevention Valve. Technical expert in a case where flow from a trunk sewer flooded and severely damaged a million dollar home in Southern California. The flooding was caused not by a blockage of the trunk sewer, but by the inadequate hydraulic capacity of the sewer. The major issues in the case involved whether having inadequate hydraulic capacity was within the normal Standard of Care and the adequacy of maintenance of an existing backflow prevention valve, which had been installed years before when the house was built, but the existence of which was unknown both to the Sanitary District and to the homeowner.

**Residential Leakage and Drainage Problems.** Have investigated leakage and drainage problems in approximately 200 houses. About a dozen of these cases resulted in legal action, in which I was used as an expert.

**Central Valley City, PCE Leakage from Sewer System.** Served as a technical expert on a case involving the alleged leakage of perchloroethylene (PCE) discharged by dry cleaning establishments from a city sewer system in the Central Valley. Issues that were addressed included: standard of care for maintenance of the sewer system; which part of the sewer system leaked; the City's procedures over time for permitting dry cleaners; and the reasonableness of the City's response when the PCE problem was discovered.

**South Coast City, PCE and TCE Leakage from Sewer System.** Served as expert witness in a case involving groundwater contamination by perchloroethylene (PCE) and trichloroethylene (TCE). The sources of the contaminants were two dry cleaners and one vehicle maintenance facility. The issues addressed by my opinions included: leakage from sewer systems; City maintenance of the sewer system; standards for construction of sewers and laterals; and the interaction of the sewer and the trench system in which it is placed.

**Sewer Backup into a Store, San Bernardino County.** Technical expert in a case where a blockage of a City sewer caused sewage to flood a store in Southern California. The City maintained that the blockage could not have been in the City line since other connected properties did not flood and since the upstream manhole showed no signs of having been flooded. Investigations revealed that other nearby buildings were connected to a different sewer and/or were at a higher elevation than the flooded store. It was also discovered that the person reporting that the upstream manhole showed no signs of having flooded was unaware that a different City crew had rebuilt the manhole subsequent to the incident. When the incident was fully understood, the City paid the full amount of the claim.

**Coliform Contamination from a Sewer.** Provided advice on the significance of coliform organisms found in soil above a sewer in a law suit involving three homeowners. The downstream homeowner attributed the coliforms to leakage of sewage from the upstream lots but sampling found that the coliform concentrations were lower in the soil near the sewer than on the surface of the plaintiff's lot. The most likely source of the coliforms at the surface was the plaintiff's dogs.

**Inadequate Construction.** Served as expert witness in a case involving the failure of a leach field at a very large single family home shortly after the leach field was constructed. While channeling the overflowing sewage away from the residence, the home owner contracted Giardia Lamblia and was banned by health officials from working for six weeks at his normal job, which involved food preparation. Investigations revealed that the Contractor had not followed the requirements of the County Health Department and had constructed less leach line than was offered in his proposal.

**Septic System Failure.** Investigated why the toilet at a rural residence would not flush properly. The tenant had called the County Environmental Health Department and the landlord had responded with a retaliatory eviction. Found that the septic tank and leach field had been flooded for a protracted period during wet weather, due apparently to improper grading that the owner had done.

**Surfacing Septic Tank Effluent.** Reviewed voluminous documents and summarized the technical facts for the attorneys for two insurance companies, whose insureds were being sued by a downslope neighbor who claimed that their septic systems were discharging on to his property. Interviewed the defendants. Prepared questions to be put to the plaintiff during depositions. Testified in a mediation hearing.

**Flooding of Apartment Complex, Phoenix, AZ.** Provided expert technical advice on the probable causes of the flooding incident, the role that grease in the sewer system may have played, and the implications of a backflow preventer. Prepared an extensive list of documents to be demanded.

**Cesspool Failure, City of Los Angeles.** Advised on the failure of a cesspool at an expensive private residence in the City of Los Angeles. The purchaser of the residence was not informed that an older cesspool had failed and had been filled in. Attempts to construct a new cesspool were unsuccessful and the house had to be vacated.

**Orange County City.** Provided expert witness services where a sewer was clogged by roots and backed up into a private residence. The contractor hired by the City to maintain the sewer lines was obligated to inspect every manhole but failed to inspect the manhole where the root blockage occurred because the cover of the manhole was buried at a shallow depth in a planter in the street. Expert testimony involved standards for use of sewer cleaning equipment.

**Coastal Los Angeles County City.** Expert witness on a case involving back up of sewage into a private home. Blockage of the sewer was caused by root intrusion into the sewer on property other than that which was flooded. Expertise involved standard of care for sewer maintenance.

**Health Center vs. City.** Provided technical advice on the cause of a backup of sewage into a health facility. The City alleged that the blockage was caused by grease from the facility and cited the facility for not having a grease interceptor as required by City regulations. The City believed the backup was due to grease because grease had been removed from two sewer segments downstream of the health facility. Investigation revealed that the two sewer segments that had had grease problems were laid with inadequate slopes and were designed by the City, but that the real cause of the blockage was an odor control elbow that the City had installed in a downstream manhole. The elbow had slipped loose and blocked the outlet pipe from the manhole.

**Mobile Home Park Sewage Overflow, Mountain County, CA.** Evaluated the source and causes of a sewage overflow into a mobile home. Analyzed the damages that were claimed to have been caused by the sewage overflow.

**Homeowner v. City.** Evaluated a situation in which a private sewer serving several residences in a court was found to be backing up. The City, which owned the public sewer to which the private sewer connected, inspected their portion of the piping and found that it was not blocked. The City then required the homeowner to replace the private sewer. After construction of the replacement sewer was complete, it was found that it again was not flowing freely. My investigation revealed that the City sewer was not low enough to serve the private sewer and that the system had been built with a sag in it.

**Defense Of A Sewer Maintenance Firm.** Served as an expert witness for a contract sewer operations firm that maintained the sewer system for a City in the Sacramento area. A business that was flooded sued the maintenance firm as well as the City and others. Developed information that showed that the maintenance firm had repeatedly pointed out the problems in the sewer system and requested that they be authorized to fix them for the City.

**Apartment Complex Versus City of San Francisco.** Served as expert witness for an apartment complex in San Francisco that had been repeatedly flooded with sewage. Determined that the flooding was due to surcharging of the City sewers several of which were admitted to have less than half of the required capacity.

**Condo Owners Versus A Sewer Contractor.** Served as an expert witness in a case where condominium owners were suing a sewer contractor who installed part of the lateral sewer system that serves the condominium complex. Determined that the plaintiffs had no specific complaints against the part of the lateral system that was installed by this contractor.

**Homeowner v. Los Angeles County and A City In The Palos Verdes Area.** Served as an expert witness in a case where sewage from a surcharged sewer into a house. The sewer blockage was caused by roots. Various protective measures that the homeowner could implement were also written up.

**Vandalism In A City Sewer In Northern Los Angeles County.** Provided information as an expert witness to support the City's contention that a blockage of a City sewer was caused by vandals putting sticks into a manhole.

**Flooding Of A Business In The Northern San Francisco Bay Area.** Served as an expert witness for a business that was flooded due to an off-set joint and a sag in the City sewer system. Determined that the City had no systematic maintenance program and had known of the off-set joint and sag in the sewer pipe for years.

**Evansville, Indiana v. USF&G, et al.** Provided technical evaluation and advice in a case involving combined sewer overflows (CSOs), mitigation measures in Bee Slough, USEPA consent decrees, the degree of responsibility of the operators of the sewer system, and whether insurance companies had responsibilities for remedying the problems.

**San Fernando Valley Area, CA.** Helped represent a homeowner whose basement had been flooded due to the backup of a City sewer system. Documented that the flooding was due to roots in the City sewer system.

**Homer, Alaska.** Provided technical information to the attorney representing three homeowners whose houses had been flooded by a stoppage in the City sewer system.

**South Florida.** Provided technical information and a report to an attorney who was representing the owner of a condominium whose unit had been flooded from the sewer that served the rest of the building. Explained why part of the unit flooded while other parts did not by obtaining the plumbing plans for the building, which showed that there were two separate building drains from the unit. Documented that the condominium was on constructive notice about defects in the common sewer because there had been previous flooding incidents.

**Flooding Of A Commercial Building, San Mateo County, CA.** Provided technical support to the owner of a commercial building that had been flooded by a blockage in the City sewer. The primary cause of the blockage was a Mexican food preparation operation that was just downstream of the flooded property. Evaluated the City's FOG (fats, oil and grease) program.

**Flooding Of A Mobile Home, Yucaipa, CA.** Served as an expert witness in a case where the sewer system in a mobile home park clogged and flooded a mobile home. The staff of the park did not contact a remediation company but instead attempted to clean the mobile home with its own inexperienced staff. This spread the contamination much further into the mobile home. Was deposed. The day after my deposition, the mobile home park management revealed that it did have a plan of the sewer system, which it had previously denied having. The judge imposed sanctions, which included a second report and a second deposition, all at the expense of the defendant park. Testified at trial. The jury found in favor of the plaintiff mobile home owner.