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Decision 92-09-042 September 2, 1992

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of
 Rosella Water Company for increase
 in rates for water service of 100
 percent in Tulare County.)

Application 89-04-032
 (Filed April 18, 1989)

Don Carter, for Rosella Water Company,
 applicant.
Justin Smith, William Louis Dolmovic, Red
 Osgood, and Paul Sampson, for Ponderosa
 Property Owners Association, interested
 party.
Daniel R. Paige, for the Commission Advisory
 and Compliance Division.

FINAL OPINION

Rosella Water Company (Rosella or applicant) after hearing was granted a final rate increase in Decision (D.) 90-01-033, issued on January 24, 1990, in this application. The decision noted that even though the rates were increased by 100%, they still allowed Rosella an inadequate return;¹ the decision predicted that the return would deteriorate still further, in future years, because of the lack of a mechanism to accommodate the effects of inflation. Moreover, the decision ordered Rosella to obtain insurance; however, because Rosella's request was limited, the cost calculations did not allow for this added cost.

¹ The applicant did not ask for a full return, presumably in response to a Commission policy which concluded that any larger relief, even though justified by rising costs or long delays in seeking rate relief, would cause unacceptable rate shock.

While the rates were made permanent, the proceeding was kept open to check on Rosella's efforts to deal with winter freeze-ups, and its compliance with certain other routine requirements.

A second public hearing was held in the vicinity on June 18, 1991, to check on compliance with the Commission's orders in the first decision. The hearing is summarized below.

Subsequently, staff reported on the applicant's efforts to deal with frozen mains during the 1991-92 winter. Its report was contained in a letter to interested parties dated April 27, 1992. The president of the Ponderosa Property Owners Association (Association) wrote to supplement the staff's account. An individual also wrote to report on his household's experience with a loss of service in February 1992.

Finally, on May 11, 1992, the Association confirmed that Don Carter, the owner and operator of the system had passed away, and that Rosella is now being managed by his son. We note that there must be an application under the provisions of §§ 851 or 854(a) to seek Commission authorization for any change of control.

We are now ready to issue a decision to consider the issues pending.

Service Area

Rosella serves over 100 customers in the Tulare County mountain community of Ponderosa. There are a substantial number of vacant lots to be sold in the subdivisions served by Rosella. Ponderosa is in the Sequoia National Forest at an elevation of 7,200 feet, about 44 miles east of Porterville on State Route 190. Most of the customers are residential.

The Ponderosa community is comprised of recreational and second homes, with a minority of the residences occupied year-round. Other customers are primarily summer residents but use the properties a few days or weeks during the coldest season. There is also a lodge with a bar and limited food service. A ski area is planned for the vicinity. When the ski facility is opened, there

will be substantial commercial development, more winter residents, full or part-time, and more demand for residential lots.

Ponderosa's subdivider was also the owner of the water utility corporation. The second hearing confirmed that further development on his property in the area would be served by Rosella rather than by a separate mutual company.

Because of the elevation, winter weather is especially severe. Still air temperatures more than 15° below zero are not uncommon. There was at least one day in the last few years when the recorded temperature was -25°. Consequently, water mains and customers' water service lines are likely to freeze. Without aggressive repair efforts, any frozen main is likely to be frozen until the spring thaw. The location also complicates repairs for winter service problems since repairmen, parts, and equipment may have to be procured from the valley and moved up a long winding road to the service area.

The problem of frozen mains is aggravated by system design. The mains are not laid out to permit circulation; where the mains dead end, the water is likely to stagnate and hence to freeze. Furthermore, some mains are laid close to rocky outcroppings. These are points where ground temperatures will drop more rapidly and, consequently, where ice blocks are more likely to form in a cold snap. It appears that some mains should have been placed further underground and possibly laid in a bed of insulating material such as sawdust. Alternatively, a fully circulating system could prevent some if not all freeze-ups and have other advantages as well. Applicant has made some progress in relaying mains to avoid freeze-ups.

Following the leadership of a customer, Rosella has evolved a means of clearing ice from a main without digging up the affected section.

Service to New Development

At the time of the last decision, the subdivider/utility owner had decided that new development on his property would be served by a mutual water company rather than the applicant's public utility. The last decision criticized these plans. The owner relented and applicant is now serving these individual developments. The expected increase in numbers of customers should provide added revenues to offset some increase in costs, thus reducing the pressure for subsequent rate increases.

Flushing Program

As a means to prevent frozen mains, the previous decision ordered Rosella to flush mains periodically in freezing weather. The order allowed alternate means of conducting the flushing, but gave a detailed schedule depending on temperature.

The evidence indicated that there were a number of consumer complaints that flushing wasted water. Residents, and apparently the owner, formed the belief that the order for flushing had been reversed and the flushing program was abandoned. Even though this belief was groundless, it offers some excuse for Rosella's failure to continue during the 1991-92 winter. The violation is further excused by the fact that it was in response to customer complaints. The failure to continue means that we have insufficient evidence to determine how well the program prevents frozen mains.

Hearing

The staff representative confirmed that Rosella has substantially complied with orders in D.90-01-033 to install production meters, to obtain insurance, to post notices, and to complete tariff filings. He described a staff field investigation conducted after the 1990-91 winter season. The investigation indicated that Rosella had complied with the main flushing schedule mandated in that decision until customers complained about wasted water. He noted, however, that the frozen main problem was

continuing and that staff had consequently recommended a second public hearing.

The president of the Association testified. It was his belief that the Commission's staff had authorized Rosella to terminate the flushing problem. In his opinion, compliance with that order had been spotty. The Association recommended a new flushing order requiring at least 15 minutes of flow once a week from November 1 to April 1 each year, with the flushing near each main dead end. He made it clear that the Association does not recommend the replacement of hydrants. On behalf of the Association, he recommended that construction equipment, such as a backhoe, and personnel be stationed on the mountain on 24-hour call throughout the winter. The Association also recommended that one specific stretch of main be dug up and relaid at a lower level. This portion of the system apparently serves only one customer.

The Association further contends that the Commission should order Rosella to restore any freeze-interrupted service within 24 hours. The Association also has reached a consensus that the rate increase should be rescinded and that amounts already collected should be refunded. This rollback would last until Rosella has passed one complete winter without problems.

Another customer made a statement concerning one incident in which Rosella did not begin to respond until three days after the original report of freeze-interrupted service. Rosella worked for three days and then quit without explanation. A temporary hookup was laid on top of the ground and itself became blocked by ice. After the family left because of lack of water, Rosella succeeded in thawing the permanent main. Several days later it froze again; Rosella continued to work for several more days and eventually discovered the main had ruptured. The break was repaired, but service was not completely restored until several weeks after work began.

He also related an incident where Rosella promised to lower a main to maintain winter service; however, it failed to do so for several years. When the main was lowered, the affected customer had service throughout the entire winter.

Service to his own residence was not interrupted by freezing during 1990-91 because Rosella worked out an ad hoc arrangement with a neighbor. Under this arrangement, the neighbor allowed his service to be used as part of the route to recirculate water in the main. He also related an incident where bungled attempts to fix a frozen main released the entire water supply for a portion of the system. He recommended another stretch of main serving three customers be lowered.

The customer is also president of the Ponderosa Service District (District). On behalf of the District, he stated that both breaks in mains and utility repair work in the street posed a hazard to District snow removal vehicles. He noted at least one incident where utility crews dug up the street and then left the hole unbarricaded. If Rosella does not notify the District of holes in the streets, its vehicles will drive in, aggravating the damage to mains and damaging District vehicles.

Another customer was very concerned because the hydrants installed by Rosella are the wrong type for cold weather areas. Water left standing in them will freeze in cold weather. Other statements indicated that only two hydrants in the service area were reliable throughout the winter. Thawing hydrants to fight a fire could cost an hour or more. Another customer recommended that the hydrants be replaced by more satisfactory ones. He noted that Rosella is spending considerable effort on keeping the existing hydrants operable. He noted that a "dry barrel" hydrant which does not freeze up is now readily available.

It was reported that Rosella's owner caused hard feelings by blaming winter service interruptions on ice in the consumers' lines. He would use this theory as an excuse for failing to

respond or even to investigate the cause. He has also retaliated against a customer who complained to the Commission staff; he refused to restore a hookup until the customer fixed supposedly substandard plumbing in her house. The alleged inadequacies had no effect on utility operations.

He also reproved customers who tried to help out utility employees who were trying to restore service, blaming them for complicating the problem. There was a report that the owner had blamed a customer for injuries to mains which occurred when the customer was assisting a utility employee in attempting to restore personal service.

Another customer recommended that Rosella provide an interface at the junction between utility-owned and customer-owned pipe. The purpose of such an interface would be to allow a quick, easy means of determining whether an ice block was a customer or a utility responsibility.

A part-time employee of Rosella stated he now lives off the mountain for family reasons. He drives vehicles for the District, so he is frequently on the hill during the winter. He will routinely check the system at least once a week and perform routine maintenance. However, if he is at home when an emergency call comes in, it may take him an hour or longer to arrive on site, depending on road conditions.

He noted that when called to an emergency he has no authority to expend money. To obtain such authority, he must contact the owner.

He uses a jackhammer when it is necessary to dig to remedy a freeze-up. He remains unconvinced that a backhoe would be useful in the winter, because the ground may be frozen hard. He also explained that Rosella does not have accurate records or blueprints of its system, complicating main repairs.

He noted that frozen mains frequently are broken during the repair process. When customers are out of water because of a

freeze-up, he will run a temporary line to the customer. He pointed out that these temporary hookups sometimes freeze also.

He reported that Rosella would have difficulty in recruiting anyone who lives in the tract to work on repairs since Rosella was known to be "pretty tough".

After repeated freeze-ups, he dug up a consumer's line and installed sawdust around it to insulate. That did not work. He then gave the customer a heat tape to be buried with the main. When temperatures are low, the customer plugs the tape into his own electrical system, thus warming the ground near the main.

In his experience, the crucial season for frozen mains lasts for about a month when temperatures are low and there is very little snow cover. In his opinion, it would be very difficult to predict where future freeze-ups will occur.

When he flushes to move water through a dead-end main, he sometimes uses a hydrant located near the end and sometimes a service installed for future use at a vacant lot. In some instances, opening the hydrant causes water to freeze on the roadway. He conceded that he could use a hose to direct the water where it would soak in.

A contractor who works for Rosella described system additions to serve new tracts and certain operational problems. He noted that much of the additional investment intended to serve these tracts also improves service to existing customers. He also noted some remaining plant deficiencies which could compromise service in summer as well as winter. He noted that pipes in the new subdivision are six feet under ground and the pump houses are winterized. Consequently, service in these areas are not likely to be interrupted by subzero temperatures.

A customer argued that a backhoe would work well for repairs in the winter since the ground is not frozen very hard or very deep.

There were several reports about consumers helping Rosella to restore service. For example, one customer invented a system to thaw a main without digging up the blocked section. This system works by threading a small flexible line into the blocked main. When the block is encountered, water is trickled through the flexible line, gradually wearing its way through the ice.

Update

In order to achieve an update on the main freeze-up problems during the winter of 1991-92, staff surveyed interested persons and wrote to the Administrative Law Judge with copies to appearances.

The letter reported that winter service interruptions appeared to be less of a problem than in the prior year. Three of the previously reported trouble spots have been corrected and did not recur. One previously reported problem recurred and required another repair.

In two instances, freeze-ups occurred where no trouble had been reported before. Reportedly, both of these were satisfactorily corrected.

Customers are still concerned with the time it takes for Rosella to respond to outages and other complaints. Customers are also concerned with deferred maintenance--such as malfunctioning remote control of pumps and wells.

The letter from the president of the Association submitted information on two additional freeze-up problems, one of which was resolved in less than a day. In another, the property was apparently vacant so it was difficult to tell when the main froze. Service was apparently restored in two weeks, with more permanent repairs scheduled for this summer. The letter reiterated the Association's desires for a permanent solution to winter service interruptions and repeated the recommendation for a rate rollback.

The letter from an individual consumer stated that his home had regularly experienced winter outages. During the summer of 1991, Rosella attempted to prevent a repeat by adding more fill and insulation around the pipe leading to the street. Even so, he lost service sometime between December and February. He notes that he loses service in years when there is little snow to cover the ground, while ample snow cover usually means uninterrupted winter service.

He did not ask Rosella for assistance. His previous experience is that the owner is more interested in placating customers than in restoring service.

Discussion

Winter Service Reliability

Rosella's tariffs specify its legal obligation to avoid and to remedy service interruptions. Tariff Rule 14 governs all unanticipated interruptions including those caused by frozen mains. The provision reads:

Continuity of Service

A. Emergency Interruptions

1. The utility will make all reasonable efforts to prevent interruptions to service and when such interruptions occur will endeavor to reestablish service with the shortest possible delay consistent with the safety to its customers and the general public.
2. Where an emergency interruption of service affects the service to any public fire protection device, the utility will promptly endeavor to notify the Fire Chief or other public official responsible for fire protection of such interruption and of subsequent restoration of normal service.

Rosella's duty under such provisions is, of course, balanced by its right to be compensated for prudent, reasonable expenses incurred

on behalf of consumers. It is also qualified by an implicit requirement that it not make imprudent or unreasonable expenditures.

Both the requirement for avoiding service interruptions and the requirement to restore service are subject to Public Utilities Code § 451 which specifies that all tariff items on services must be "just and reasonable".

Under such a standard, a utility should not offer a service without considering its cost. A utility could not, for example, be ordered to rebuild its system to achieve the zero defect winter as proposed by the Association without a finding that compliance is achievable without unreasonable costs. The same is true of restoring service; we could not order the utility to restore every freeze-interrupted service within 24 hours without considering what it might cost to achieve the goal.

Without the reasonableness test, setting unrealistic service standards would effectively write a blank check for utility management. It could spend thousands replacing a main to serve a single customer, or on repairs for a single customer, and demand compensation in the form of a rate increase. If the Commission had set such service standards, it would find it difficult, if not unlawful, to reject even a very great increase on the grounds that the costs were not justified by the improvement in service.

Obviously, any decision setting service standards for wintertime reliability should consider the level of rates acceptable to the average consumer. In this case, the problem is complicated by the fact that most consumers are summer-only residents who would presumably object to even a small rate surcharge to cover added costs of improved wintertime reliability.

The Association by demanding very high service standards in combination with a rate decrease was therefore pursuing incompatible objectives. Further, it would appear that the Association-sponsored service standards failed to consider the

difference in interests between summer-only and winter residents.²

Consequently, it does not appear that it is necessary to impose new service standards at the present time. We and the consumers no longer need concern ourselves with the deceased owner's idiosyncratic approach to wintertime-service interruptions.

Now that that cause of consumer dissatisfaction is no longer a problem, we can expect the Association to reformulate its demands to consider the relationship between costs and reliability.

At the same time, it appears that the utility has been able to achieve a tolerable, if not ideal, standard of service reliability within the severe constraints imposed by the last rate decision. This may have been due to a full winter of operations under the flushing program.

Instead of attempting to impose new, more detailed reliability standards, we will order the utility to comply with its tariff Rule 14. Even though it is now obligated to comply, this order will add new enforcement powers should they be necessary. We will urge the utility to actively seek input from both summer and winter consumers on the proper level of expenditures on wintertime reliability. While the tariff item and the statute do not require consumer consent for incurring new costs for reliability, such consultation will obviously reduce the need for future litigation.

We should add that not all improvements in wintertime reliability will require major expenditures. In addition to the main flushing program, we note the initiative to develop a new

² We have considered the possibility of setting higher rates for winter than for summer-only consumers. This would have the advantage of imposing any added costs for winter reliability on the class of customers who benefit from such reliability. Nevertheless, it does not appear practical to enforce such differential in an unmetered system.

method of unfreezing a main, and the ad hoc method of circulating water through a dead-end main. While we cannot demand further innovations, we can hope that a new spirit of cooperation between customers and utility will lead to other low-cost service improvements.

We will also authorize Rosella to establish a memorandum account for all expenditures to avoid freeze-ups or to restore service, subject to possible later review on reasonableness and prudence grounds.³

We will further order Rosella to respond to reports of wintertime-service interruptions on the presumption that they are caused by an ice block in its system rather than in the customer's line, until it has reason to believe otherwise.

Fire Protection

We are concerned with maintaining fireflow in the winter. On the other hand this concern must be tempered by a recognition that wild fires are less apt to occur during the coldest weather, particularly when there is snow on the ground. We also recognize that domestic fires are less likely to occur during periods when only a few of the residences are occupied. Based on these considerations, we will not commit Rosella to heavy expenditures to avoid hydrant freeze-ups, until there has been some consideration of both costs and benefits and an opportunity for consumer input. However, we will require that any new hydrants installed be better suited to cold weather.

³ Without such an order, the utility would be unable to seek reimbursement for expenses occurring before the next Commission order on rates. Allowing expenses to be recorded does not guarantee reimbursement; any expense incurred can be disallowed if not found prudent and reasonable in light of the tariff as interpreted herein.

To reduce the frequency of frozen hydrants, we will order Rosella to inspect each hydrant on its system with the same frequency that it flushes mains. We will expect customers to supplement these inspections by reporting any hydrant which is obviously out of service.

We will also order Rosella to conform to Paragraph 2 of the Continuity of Service tariff rule quoted above.

As explained, we have not required Rosella to establish a schedule for replacing older hydrants at this time. We will, however, require it to consult with the local fire protection agency.⁴

We will further order Rosella to allow individual or small groups of customers to contribute the cost of replacing the hydrant which serves them. Such contributions will of course, not be included in rate base and will have no effect on rates.

Finally, we will permit costs of ownership for any improved hydrants paid for by Rosella and any expenses for restoring frozen hydrants to service to be added to the memorandum account.

Capital Costs From New Tracts

The Association asks the Commission to order a special accounting rule to prevent ratepayers in older tracts from being charged for plant installed to serve new tracts.

We can understand existing customers' concern with this issue. The plant serving the older sections of the service area

⁴ The Commission recognizes that local fire protection agencies have responsibilities which overlap those of the Commission. As a practical matter, the Commission will not question such an agency's power to require a utility to replace a hydrant before the end of its economically useful life. In such a case, we would, however, expect the agency to pay for the new hydrant. In this way, the taxpaying public, rather than the ratepaying public, would be asked to bear the cost.

was installed at comparatively low dollar costs. If Rosella were permitted to charge the capital costs of the higher-priced new plant against all customers, the result could be seen as a form of ratepayer subsidy for the owner's real estate ventures.

We should explain that the Commission has adopted a Main Extension Rule. One purpose of this rule is to protect existing customers from being burdened by the capital costs for facilities which serve subsequent developments. The rule operates by requiring the developer to advance or contribute the capital needed to pay for new, in-tract utility facilities.

Under the rule, no customer will pay capital costs for contributed plant. If the new plant was instead financed by advances⁵, Rosella will repay the developer over a period of 40 years. In theory, the amount of such payments is eventually added to Rosella's rate base; in practice, the increase in rate base is offset by depreciation. Since the payback is spread over a period which approximates the depreciation for the in-tract facilities, the payback will have little, if any, net effect on rate base. Thus, we can predict that the capital costs attributable to Rosella's service to new subdivisions will be minimal for ratemaking purposes.

Therefore, we will reject without prejudice, the Association's request for special accounting rules. Since this rejection is without prejudice, the Association may renew its request for special treatment when and if applicant files another rate case.

We should also re-explain why we encouraged Rosella, rather than a developer-dominated mutual, to serve the new tracts.

5 If a utility owner/subdivider failed to make the required advances in accordance with the Rule, the investment would be presumed to be a contribution. There would be no payback or depreciation.

When a utility has only a few customers, per-customer costs for many essential activities are relatively high. As new customers are added, revenues ordinarily increase faster than costs. Because of such economies of scale, adding new customers will ordinarily enable a small utility to maintain good service while reducing the need for rate increases. Thus, the last decision's recommendation that new tracts be served by this utility rather than a mutual was expected to provide both more economical and more reliable service for existing customers. It also should be noted that the proposed mutual had the best well in the area. That supply is now available to all customers.

Cooperation with District

It appears that Rosella has failed to notify the District when it is making wintertime repairs in the street. Since holes in the street may quickly be covered with snow, plows or other vehicles can drive in, possibly damaging the vehicles or injuring workmen.

We will order Rosella to give notice to the District when working in the streets during winter. This latter order will be in effect year-round and will serve to protect all traffic on roads in the development. It will also be ordered to purchase lighted portable warning barricades and employ them whenever broken mains or road work weakens or disrupts road surfaces, winter or summer.

Disposition

We believe that this decision will help to clarify the problems which the new utility management will face, and will also provide for consumer involvement in those decisions which require a trade-off between low rates and improved system reliability.

For this reason and because there will be new management which will have the opportunity to institute new policies, we conclude that it is no longer necessary to keep this proceeding active as a vehicle to consider service problems. If the informal procedures described above produce further disputes, a new

proceeding can be opened, at the instance of either applicant or consumers.

Findings of Fact

1. Applicant failed to perform main flushing as required by D.90-01-033. This flushing program was suspended in response to consumer complaints about wasted water. The program was suspended in the unreasonable belief that the suspension was authorized by the Commission. No sanctions are warranted.

2. There is insufficient evidence to determine whether applicant could restore service within 24 hours after all main freeze-ups without excessive costs.

3. There is insufficient evidence to find that applicant can reasonably be expected to avoid all main freeze-ups for an entire winter without excessive costs.

4. There is insufficient evidence to support any reduction in rates authorized in D.90-01-033.

5. The record is insufficient to determine the costs and likely benefits of increased efforts to restore service after winter freeze-ups or of efforts to reconstruct parts of the system to avoid freeze-ups.

6. It would be premature to order expenditures for construction equipment, for accelerated main replacement, and/or for hydrant replacement or for expedited efforts to restore service after a winter-service interruption.

7. Costs, benefits, and rate design for expenditures for construction equipment, for accelerated main replacement, and/or for hydrant replacement and for accelerated restoration of service efforts should be considered in an informal procedure which allows for consumer input and the formation of consensus.

8. The flushing schedule should be restated for clarification. Applicant should be required to keep a log showing compliance with the schedule.

9. Rosella should be ordered to comply with Paragraph 2 of its Continuity of Service provisions of its tariff.

10. Applicant has refused to begin investigating the cause of some winter service interruptions based on an unsubstantiated belief that the customer's service has frozen.

11. Too many hydrants are out of service during freezing weather.

12. Rosella should be prohibited from installing any new hydrants on its system which are not of dry-barrel type or any other type which resists freezing.

13. During periods when flushing is required, Rosella should be ordered to inspect hydrants with the same frequency and to thaw any found inoperable.

14. Rosella should be required to replace any hydrant when a customer or group of customers offers to contribute the cost, including gross-up for taxes.

15. Broken mains and utility excavations in roads have become traffic hazards. Rosella should be required to post warning signs all year and to warn District in the winter.

16. If further disputes arise over expenditures for wintertime reliability or over system design or standards for remedying outages, they should be conducted in a new proceeding.

17. Rosella should be ordered to comply with Paragraph 1 of the reliability provisions of its tariff.

18. Rosella should be authorized to institute a memorandum account and record expenditures as described in the text.

19. No special accounting rules are needed to ensure that old customers are not burdened with capital costs properly attributable to new developments.

Conclusions of Law

1. Tariff provisions govern a utility's duty to serve. There is an implied limitation that expenditures to improve service reliability or to restore service must be reasonable and prudent.

2. A utility has a right to a fair opportunity to recover reasonable prudent expenditures expended to restore service or to avoid interruptions to service.

3. The rate increase in D.90-01-033 did not include an allowance for increased expenditures on restoring service or additional capital costs for expenditures to avoid interruptions to service.

4. The record in this proceeding is insufficient to support any of the proposals of Association, because we cannot balance costs against benefit, and because we lack consumer input on whether rate increase would be acceptable to improve winter reliability.

5. The Commission should order applicant to begin and complete repairs of frozen mains and to make investments in preventing winter-service interruptions under the terms of its tariff, as interpreted in the body of this decision.

6. Applicant should be required to make reasonable efforts to investigate the cause of any reported wintertime-service interruption before delaying or refusing corrective action on the grounds that it has been caused by a block in the consumer's service.

7. Rosella should be required to place lighted barricades all year and to warn District in the winter, when work in roads or broken mains might endanger traffic.

8. Applicant should be required to inspect hydrants during the winter. If any new hydrants are added to its system, they should be of a design which resists freezing.

9. Without more evidence to demonstrate compatibility, we should not issue any order requiring applicant to restore service after a frozen main within 24 hours.

10. This proceeding should be terminated.

FINAL ORDER

IT IS ORDERED that:

1. Rosella Water Company (Rosella) shall comply with Rule 14 of its tariff.
2. Rosella shall drain mains as follows:
 - a. When noontime temperatures drop below 32 degrees F in the shade for two consecutive days: At least every two weeks.
 - b. When noontime temperatures drop below 20 degrees F in the shade for two consecutive days: At least every week.
 - c. When noontime temperatures drop below 10 degrees F in the shade for two consecutive days: Daily

Drainage shall be performed at the hydrant nearest the end of each dead-end main; if no hydrant is located within 20 feet of the end, a riser and valve shall be installed and used for such drainage.

3. Rosella shall maintain a daily drainage log commencing each year when noontime temperatures drop below 32 degrees F in the shade for two consecutive days and ending May 1. The items logged shall be noontime temperature in the shade, the location of each drainage performed and the time of flow.

4. Rosella shall inspect each hydrant on its system on any day when it is required to flush mains. It shall enter each such inspection in the log described in Ordering Paragraph 1. It shall make reasonable efforts to restore any frozen hydrant to service.

5. Rosella shall not install any new hydrants on its system which are not of the dry-barrel type or otherwise resistant to freezing.

6. Rosella is authorized to begin and maintain a memorandum account which shall include the costs of ownership of all investments to prevent, and of all purchases of equipment to

remedy, frozen mains and of all costs to restore service after a main has frozen. It may also add to the account any out of pocket costs necessary to restore a frozen hydrant to service.

7. In the event that Rosella elects to install any new or replacement hydrant on its system, the hydrant shall be a barrel-type or other freeze resistant type of hydrant.

8. In the event any customer or group of customers offers to pay the full costs, including increased taxes, of installing a new qualifying hydrant to serve him/her or them, Rosella shall install such hydrants, recording such costs as a contribution.

9. Rosella is ordered to comply with Paragraphs 1 and 2 of the Continuity of Service provisions of its tariff.

10. Rosella shall obtain lighted traffic barricades and deploy them to warn of any weak spots or breaks in pavement caused by repair operations of failures in its mains.

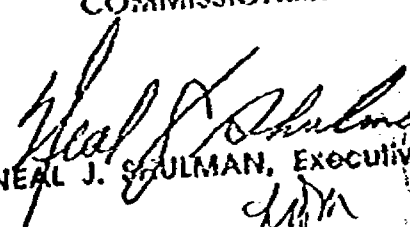
11. If any weak spots or breaks in pavement occur during the period covered by Ordering Paragraph 1, Rosella shall notify the Community Services District as soon as possible by telephone or fax.

This order terminates the proceeding, and supersedes
D.90-01-033 with respect to the requirements for flushing.
This order becomes effective 30 days from today.
Dated September 2, 1992, at San Francisco, California.

DANIEL Wm. FESSLER
President
JOHN B. OHANIAN
NORMAN D. SHUMWAY
Commissioners

Commissioner Patricia M. Eckert,
being necessarily absent, did
not participate.

I CERTIFY THAT THIS DECISION
WAS APPROVED BY THE ABOVE
COMMISSIONERS TODAY


NEAL J. SULMAN, Executive Director
