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File County
City of Grand Junction

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The present Grand Junction sewage treatment plant was originally constructed in 1938. It was designed to provide a minimum of primary treatment for the population at that time of about 12,000. Under today's standards, however, that same plant could provide preliminary treatment for about 6,000 persons.

In 1957 the population of the Grand Junction area had risen to about 20,000, and a study of the sewer system showed that the sewer plant could not meet current standards by serving a population of more than 8,000. The study revealed that untreated sewage was being dumped into the Colorado River, much of it coming from rapid development east of the Grand Junction city limits. As a result of the study it was recommended that the existing plant be upgraded to a secondary treatment plant capable of serving 20,000 people and that a new plant be constructed east of the existing plant capable of serving 10,000 people. These improvements were made and served the area east of Grand Junction as well as the City for about ten years before additional improvements were made.

In the late sixties, a sewage master plan recommended that the second plant that was built be abandoned because of its poor operating history, and because of its limited service area. The plan recommended that a new treatment plant be built downstream from the existing plant. Because of the cost involved in building an interceptor line to the recommended plant site, it was decided to enlarge the present plant to serve a population of 40,000 and to abandon the second plant that had been built in 1957. This was done in 1969 and that is the system that we are operating at this time.

When the plant was improved in 1969 the federal standards required that treatment plants be designed to remove at least 80% of the pollutants from the water before being discharged to a stream. The City had received an EPA grant to construct the modifications and all the design standards were met. The plant was also to serve as a regional plant because of the federal tax dollars used for construction.

With the Water Pollution Control Act Amendments of 1972 came a change in treatment standards. Instead of a percentage removal, absolute limits were placed on the amount of pollutants that could be discharged to the stream. Even though the Grand Junction plant was operating with high efficiency, either modifications or a reduced capacity was necessary.

The Ute Water Conservancy District was created in 1956 and began operation in 1961, supplying domestic water to the rural areas surrounding Grand Junction. With the availability of domestic water, development and residential areas began to appear where the land had been devoted to agriculture or where the land had been unusable. Some of these areas made use of on-site septic systems but Sanitation Districts were formed also to build sewage collection systems to transport sewage to the regional sewage treatment plant. In some small neighborhood areas, homeowner associations were formed in some cases rather than sanitation districts to install sewage collection systems.

The City was interested in sewage collection systems being built because as owner and operator of the regional treatment the City was responsible for the quantity and quality of the sewage being delivered to the plant. Both the quantity and the quality of the sewage can be greatly effected by the quality of construction of the collection system. The City took the position of assisting and co-ordinating sewer collection systems being built outside of the City limits to help assure that the bits and pieces being built would fit together into one system that could be efficiently operated by one entity. It was felt that to prevent duplication of systems and efforts as well as to keep to a minimum the number of sanitation districts could be in the best interest of the community.

In addition to growth outside of the City, the continued growth in the City, the requirements of new discharge standards, and the need for extensive repairs to the existing plant emphasized the need to provide increased capacity in the regional treatment plant. The City decided to try to obtain 75% EPA funding for the additional capacity. Public Law 92-500 specifies that EPA grants will be issued in three steps. Step I grants are for communities to develop facilities plans to identify the needs for sewage treatment and develop a recommended plan for meeting those needs. This requirement is given in Section 201 of Public Law 92-500, therefore these plans are referred to as "201 Plans".

The State Department of Health established the boundary for the Grand Junction area 201 plan and the City contracted with N.H.P.Q. (now Arix) consulting engineers to prepare the plan. Although the 201 boundary extended far beyond the city limits, the study was funded totally by EPA and City funds. Any district within the 201 boundary is eligible for EPA funding to build any improvements recommended in the plan. Since the 201 boundary involved both the City

and the County as well as sanitation districts, it was determined that an advisory committee comprised of members of all areas and entities involved should be formed to advise the County Commissioners and City Council of the needs and priorities of the area as well as to help coordinate the implementation of the 201 plan. The Valley Wide Sewer Advisory Committee was established and became active in selection of design engineers, recommending plans for approval by the City and County, and other activities related to the implementation of the 201 plan.

The 201 plan was completed in 1975 and recommended that the existing treatment plant be improved and that a new 7.5 million gallon per day plant be built between Grand Junction and Fruita. When the plan was presented to the sewer advisory committee it was determined that additional studies should be made regarding the implementation of land application of sewage as an alternative to mechanical and biological treatment. The EPA also determined that additional studies should be made on ammonia levels in the Colorado River to determine the level of treatment that would be required at the new plant.

As a result of the additional study the 201 plan was ammended to recommend that the existing plant be abandoned and that a new 12.5 million gallons per day plant which could be expanded to 25 million gallons per day be built between Grand Junction and Fruita. The Valley Wide Sewer Advisory Committee recommended that the new facility be owned by the County, but that the City provide for operation and maintenance. The new plan was accepted and the City and County executed a joint agreement whereby the County would own the new plant and the City would operate it.

In addition to the new plant the 201 plan recommends the construction of certain sewer interceptor lines to transport sewage from the collection systems to the new plant. Three interceptors will bring sewage from the Redlands area, now developed with a population of about 7,000, across the Colorado River to the new plant.

Construction of the improvements recommended in the 201 plan will take place in phases over the next three and a half years. Bids were taken on the River Road/Paradise Hills Interceptors in May 1980. Construction is expected to begin in July 1980 and end in July 1981. Bids should be opened in August 1980 on the first phase of the new plant with construction beginning in October 1980 and ending in July 1981.

The first phase of the new plant will be the construction of the flow equalization basin which will operate for two years as a "miniplant" capable of treating up to one million gallons per day. It is by this means of phased construction and operation that continued growth and building will be allowed which might otherwise be prohibited by the loading of the existing plant to capacity. The interim plant and the River Road Interceptor to deliver sewage to the interim plant are scheduled to be completed at the same time so they can be put into operation immediately upon their completion.

It is planned to open bids on the main plant in November 1980. Construction should start in January 1981 and end in January 1983. The remaining interceptors will be completed so that they can be put into use after completion of the new plant.

The cost of the entire project is estimated to be \$30 million. All phases of the project have been determined to be eligible for 75% EPA funding. Oil shale trust fund monies in the amount of one million dollars have been committed to this project. It is anticipated that a local revenue bond issue of \$9 million will be needed to supply the local share of the cost of the new facilities and to refund the existing outstanding bonds. The requirements for proper rates and fees to make the debt payments and operate and maintain the system are being met. Adjustments will be made as necessary to continue to recover the cost of operation and meet the requirements of the bond repayment schedule.