

APPLICATION FOR APPROVAL OF SEWAGE COLLECTION FACILITIES

(Submit two copies of Application with one set of design calculations, plans, and specifications unless state grant is involved; then submit two copies of everything.)

Applicant: City of Grand Junction

Address: 250 North 5th Street, Grand Junction, Colorado

(The following must be completed by the applicant or his designated representative.)

A. GENERAL INFORMATION:

1. Name of wastewater treatment facility to handle waste. _____

Wastewater Treatment Plant, City of Grand Junction

Nature of proposed facility: collection lines and pump station

2. Design capacity of wastewater treatment plant:

Hydraulic (MGD) 5.8 Organic (BOD₅) 12100

3. Present load to plant:

Hydraulic (MGD) 4.70 Organic (BOD₅) 9111

4. Proposed lift station, sewer or interceptor, when fully developed, will increase plant load to:

Hydraulic (MGD) 11,550 Organic (BOD₅) 7.0

This will bring the loading of the plant to 81 percentage of hydraulic and 75 percentage of organic capacity.

5. If an existing treatment plant has unused capacity, how much of this unused capacity has been obligated to other proposed developments?

B. LIFT STATION:

1. Is site subject to flooding? No. On a separate sheet of paper describe protective measures to be taken.

2. Distance to nearest residences? 200 ft.

3. What steps are being taken to minimize or prevent overflows? _____
Storage for historic electricity outage period.

Where will overflow discharge to? 24" Grand Junction sewer

4. Is there a warning system in case of equipment failure? yes
Is standby power provided? no.

C. SEWER OR INTERCEPTORS:

1. Size 8" Length 2830 Maximum Capacity .75 cfs
(Pipe diameter) (in feet)
2. Schematic diagram. Attach a schematic diagram showing sewage collection facility. This should include the hydraulic capacities and ownership of all downstream sewers and treatment plants. See attached
3. At the present time, the subsequent receiving sewers or interceptors are carrying a peak flow of 1.9 and flowing at a depth of 11".
(flow in cfs) (in inches)
4. Will the additional load from this proposed sewer or interceptor bring the sewage treatment works to within 95 percent of peak hydraulic capacity?
no. If so, identify what part of the sewage treatment works.

Will the additional load cause raw sewage to be discharged to the waters of the State? No

See Section 25-8-103(15), C.R.S. 1973 for the definition of "sewage treatment works."

5. Distance to the nearest water line: 10 ft.
6. Will the sewer replace any existing septic tank and leach field systems?
yes. If so, please identify them. El Poso area
33 living units with no sewer system.

D. CONSULTING ENGINEER: City Engineer-Utilities, City of Grand Junction
Consulting engineer's mailing address and telephone: 250 N. 5th Street
Grand Junction, Colorado

E. ADDITIONAL INFORMATION MAY BE REQUIRED BY THE DISTRICT ENGINEER.

November 16, 1976
Date

David L. Boyles
Signature of Applicant

11-17-76 Approved David L. Boyles Mesa County Health

EL POSO SEWER SYSTEM

ENGINEER'S REPORT

The purpose of this project is to provide sewerage collection service to the El Poso area within the city limits of Grand Junction. The project will consist of sewage collection lines and a pump station which will transport the sewage to the City of Grand Junction wastewater treatment plant for treatment and disposal. The El Poso area consists of 33 existing units which are serviced in septic tank or cesspool systems. Because of soils with high percolation rates and high ground water, sewage treatment is needed for this area.

Houses served - 33.

Sewage produced: Average day based on 3.5 people per house and 100 gallons per day per person - 11,550

Peak flow rates - 400 gallons per person and 3.5 persons per household - 32 gallons per minute.

Design period - 20 years.

Population density - 1.5 houses per acre

Infiltration rate of the system is 200 gallons/inch/mile/day.

No industrial contributors are located within the area.

The pipe size of the system is eight inches which will cause a velocity of not less than 2. feet per second at minimum design grade of .004.

The maximum capacity of the system is 32 gallons per minute with the pump station being the limiting factor.

The area included in El Poso Subdivision is the only unserved area which is tributary to the proposed pump station.

The pump station will consist of storage sump for storage during electricity outage and flow equalization and a 32 g.p.m. pneumatic ejector pump station.