

RECOMMENDATIONS FOR CHANGES IN THE SANITARY
SEWER SERVICE FEES FOR MESA COUNTY AND THE
CITY OF GRAND JUNCTION, COLORADO

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INTRODUCTION

In 1979 the Grand Junction City Council decided to establish a sewer rate structure which would, beginning in 1980, generate enough revenue from the users of the sewer system to cover the cost of operation and maintenance of the system as well as retire the debt service for capital construction projects.

A rate structure was developed which, in the opinion of the City, State, and EPA, provides for a fair and equitable rate for each user of the system. A unit charge was established with the unit being equal to a single family residence as far as volume and strength of sewage is concerned. All other rates are based on multiples of the base unit called the equivalent residential unit (EQU).

The bond covenants for the \$8 million revenue bonds requires that the City staff review the rate structure annually and that an independent outside engineer review the rate structure at least every five years. The EPA has also suggested that the rate structure be reviewed every year or two as a condition of the grants made for this project. In addition to the above requirements, the County Commissioners and City Council have asked that the staff review the rate structure annually and report on the revenue versus expenditure status of the sewer fund so that decisions can be made regarding the necessity of rate changes.

The revenue bonds to provide the local share of the funds to build a new sewage treatment plant were issued by Mesa County. The County will own the new plant and interceptor lines. The City and the Sanitation Districts will continue to own the collection system lines in their respective districts. The City and County have agreed that the City will operate and maintain the new sewage treatment plant. Because of this arrangement, this report including recommendations concerning the rate structure is being submitted to the Mesa County Board of Commissioners for their action and then to the Grand Junction City Council for conformation and implementation.

BACKGROUND

The current sewer service charge rate structure reflects the net result of one increase since 1971. There was one other increase for a one-year period before rates were reduced back to the rates established in 1971. The rates were completely restructured in 1980 not only to generate enough revenue to meet operating expenses as well as to meet the debt service of the new bond issue; but also to establish a fair and equitable system of charges. It is the policy of the City and County, as well as an EPA grant requirement, that each user of the system pay a portion of the cost of the system in proportion to the amount of sewage generated by that user and that the total fees collected cover the cost of constructing and operating the system.

Because the service charge rate structure was changed, there was no uniform increase for all users and it is difficult to compare the amount of increase among all of the users. For example some users (outside City-single family residence) experienced a 2% increase and some users (apartment houses) experienced a threefold increase. Prior to that change, users such as apartment complexes were being subsidized by other users and sales tax revenue while some users were receiving almost no subsidy.

In setting the rate structure for 1980 the cost of operating the system was divided by the number of gallons of sewage treated to establish a unit cost. To establish the debt retirement cost the then estimated bond payment of \$583,604 was used. Now that the bonds have been issued we know that the bond payment and reserve fund contribution for 1981 will be \$770,826. In 1980 the operation and maintenance cost was \$694,844. For 1981 this cost will be \$1,142,670, an increase of \$447,826. Most of this increase (\$300,000) is due to the replacement of the Duck Pond Pump Station.

If the City and County policy, as well as the grant requirement, is to continue to be met an increase in rates for 1981 is necessary to meet the increases in operation and debt retirement costs shown above.

SEWAGE COLLECTION

| <u>1976</u> | <u>O & M</u> | <u>Cap. Imp.</u> |
|------------------------|------------------|------------------|
| 01 System Maint | 78,966 | 49,072 |
| 02 Line Replacement | <u>4,860</u> | <u>214,005</u> |
| Total | 83,826 | 263,077 |
| <u>1977</u> | | |
| 01 System Maint. | 108,395 | 45,000 |
| 02 Line Replacement | <u>7,261</u> | <u>87,500</u> |
| Total | 115,656 | 132,500 |
| <u>1978</u> | | |
| 01 System Maint. | 107,277 | 350 |
| 02 Line Replacement | <u>12,604</u> | <u>50,000</u> |
| Total | 119,881 | 50,350 |
| <u>1979</u> | | |
| 01 System Maint. | 132,584 | 43,700 |
| 02 Line Replacement | <u>13,217</u> | <u>65,000</u> |
| Total | 145,801 | 108,700 |
| <u>1980</u> | | |
| 01 System Maint. | 170,005 | 86,000 |
| 02 Line Replacement | <u>18,805</u> | <u>80,000</u> |
| Total | 188,810 | 166,000 |

SEWAGE TREATMENT

| <u>1976</u> | <u>O & M</u> | <u>Cap. Imp.</u> |
|----------------------|------------------|------------------|
| 01 Oper. & Maint. | 169,869 | 21,554 |
| 02 Lift Stations | <u>9,218</u> | <u>-0-</u> |
| Total | 179,087 | 21,554 |
| <u>1977</u> | | |
| 01 Oper. & Maint. | 176,479 | 71,735 |
| 02 Lift Stations | <u>12,361</u> | <u>-0-</u> |
| Total | 188,840 | 71,735 |
| <u>1978</u> | | |
| 01 Oper. & Maint. | 191,937 | 15,151 |
| 02 Lift Stations | <u>13,378</u> | <u>11,000</u> |
| Total | 205,315 | 26,151 |
| <u>1979</u> | | |
| 01 Oper. & Maint. | 238,660 | 22,950 |
| 02 Lift Stations | <u>18,480</u> | <u>1,250</u> |
| Total | 257,140 | 24,200 |
| <u>1980</u> | | |
| 01 Oper & Maint. | 258,907 | 8,291 |
| 02 Lift Stations | <u>16,586</u> | <u>1,250</u> |
| Total | 275,493 | 9,541 |

SEWAGE COLLECTION

| <u>Gallons</u> | | <u>O & M</u> | <u>Replacement Costs</u> |
|----------------|------|------------------|--------------------------|
| 1,460,000,000 | 1976 | 83,826 | 263,077 |
| 1,567,000,000 | 1977 | 115,656 | 132,500 |
| 1,750,000,000 | 1978 | 119,881 | 50,350 |
| 1,900,000,000 | 1979 | 145,801 | 108,700 |
| 2,080,500,000 | 1980 | 188,810 | 166,000 |

SEWAGE TREATMENT

| | | |
|------|---------|--------|
| 1976 | 179,087 | 21,554 |
| 1977 | 188,840 | 71,735 |
| 1978 | 205,315 | 26,151 |
| 1979 | 257,140 | 24,200 |
| 1980 | 275,493 | 9,541 |

ADMINISTRATION & BILLING

| | | |
|------|--------|-----|
| 1976 | 48,939 | -0- |
| 1977 | 55,710 | -0- |
| 1978 | 63,534 | -0- |
| 1979 | 47,763 | -0- |
| 1980 | 55,000 | -0- |

TOTALS

| | | |
|------|---------|---------|
| 1976 | 311,852 | 284,631 |
| 1977 | 360,206 | 204,235 |
| 1978 | 388,730 | 76,501 |
| 1979 | 450,704 | 132,900 |
| 1980 | 519,303 | 175,541 |

TOTAL O & M & REPLACEMENT

| | |
|------|---------|
| 1976 | 596,483 |
| 1977 | 564,441 |
| 1978 | 465,231 |
| 1979 | 583,604 |
| 1980 | 694,844 |

1980 OPERATION & MAINTENANCE

| | <u>Total</u> | <u>Per 1,000 Gal.</u> |
|-------------------|----------------|-----------------------|
| Sewage Collection | 188,810 | 0.091 |
| Sewage Treatment | 275,493 | 0.132 |
| Admin. & Billing | 55,000 | 0.026 |
| Total | <u>519,303</u> | <u>0.240</u> |

1980 DEBT RETIREMENT

| | <u>Total</u> | <u>Per 1,000 Gal.</u> |
|------------------------------|--------------|-----------------------|
| Seris A Principal & Interest | 103,502 | 0.050 |

1980 REPLACEMENT COSTS

| | <u>Total</u> | <u>Per 1,000 Gal.</u> |
|-------------------|----------------|-----------------------|
| Sewage Collection | 166,000 | 0.080 |
| Sewage Treatment | <u>9,541</u> | <u>0.005</u> |
| Total | <u>175,541</u> | <u>0.085</u> |

1980 Cost of Operation

| | <u>Total</u> | <u>Per 1,000 Gal.</u> |
|-------------------------|----------------|-----------------------|
| Operation & Maintenance | 519,303 | 0.250 |
| Debt Retirement | 103,502 | 0.050 |
| Replacement Costs | <u>175,541</u> | <u>0.084</u> |
| Total | <u>798,346</u> | <u>0.384</u> |

1980 REVENUE

| | |
|---------------------------------|--------------|
| Sewer Use Charge - Inside City | \$ 776,240 |
| Sewer Use Charge - Outside City | 275,012 |
| Sewer Tap Charges | 555,604 |
| | <hr/> |
| | \$ 1,606,856 |

1981 OPERATION & MAINTENANCE
 Est. Gal. Treated 2,263,000,000

| | <u>Total</u> | <u>Per 1,000 Gal.</u> |
|-------------------|------------------|-----------------------|
| Sewage Collection | \$240,201 | 0.011 |
| Sewage Treatment | \$362,619 | 0.160 |
| Admin. & Billing | <u>\$110,000</u> | <u>0.049</u> |
| Total | \$721,820 | 0.220 |

1981 DEBT RETIREMENT

| | <u>Total</u> | <u>Per 1,000 Gal.</u> |
|------------------------------|--------------|-----------------------|
| Bond P & I Plus Reserve Fund | \$770,826 | 0.341 |

1981 REPLACEMENT COSTS

| | <u>Total</u> | <u>Per 1,000 Gal.</u> |
|-------------------|------------------|-----------------------|
| Sewage Collection | \$116,400 | 0.051 |
| Sewage Treatment | <u>\$313,450</u> | <u>0.139</u> |
| Total | \$429,850 | 0.190 |

1981 COST OF OPERATION

| | <u>Total</u> | <u>Per 1,000 Gal.</u> |
|-------------------------|------------------|-----------------------|
| Operation & Maintenance | \$721,820 | 0.220 |
| Debt Retirement | \$770,826 | 0.341 |
| Replacement Costs | <u>\$429,850</u> | <u>0.190</u> |
| Total | \$1,913,496 | 0.751 |

1981 REVENUE

BASED ON EXISTING RATES

| | |
|---------------------------------|-------------------|
| Sewer Use Charge - Inside City | \$ 800,000 |
| Sewer Use Charge - Outside City | \$ 300,000 |
| Sewer Tap Charges | <u>\$ 500,000</u> |
| | \$1,600,000 |

RECOMMENDATION

As can be seen on the previous pages the estimated revenue for 1981 is \$1,600,000 and the projected expenditures are \$1,913,496, a difference of \$313,496. This difference is roughly the cost of a major replacement project to be done in 1981. That project is the replacement of the Duck Pond Pump Station on Orchard Mesa. That pump station was designed and built prior to the annexation of a large portion of Orchard Mesa into the City. Upon annexation, a sanitary sewer system was constructed to serve houses that had been on septic systems. About the same time, the Orchard Mesa Sanitation District was formed to serve most of the developed area of Orchard Mesa that still remained outside of the City. Because of this increased load on the Duck Pond Pump Station and because of its continued deterioration due to age it is necessary to replace the station with a new and larger station. Although this project is a one time project, allowance should be made for this level of expenditure on a continuing annual basis because of continual replacement and repairs to various parts of the total system.

It should be pointed out also that in the projected revenues for 1981 the tap charge revenue is estimated at \$500,000. This seems to be a reasonable amount when compared to 1980 but it must be emphasized that the revenue from tap charges is much more subject to reduction than is the revenue from monthly service charges. For that reason, in the feasibility report for the issuing of bonds the revenue from tap fees is shown at \$300,000 through 1983 and reduced thereafter. In order to be consistent with the feasibility report and to be conservative with the estimates, only \$300,000 should be shown as tap fee revenue for the purpose of calculating rates.

With the above considerations, the 1981 recommended rates are calculated as follows:

$$\frac{\$1,142,670 \text{ (1981 O\&M)}}{2,263,000 \text{ (thousands of gallons)}} = \$0.50 \text{ per thousand gallons}$$

$$\frac{\$770,826 - \$300,000 \text{ (1981 debt retirement)}}{2,263,000 \text{ (thousand of gallons)}} = \$0.21 \text{ per thousand gallons}$$

$$\begin{array}{r} \$0.50 \text{ O\&M} \\ + \$0.21 \text{ Debt} \\ \hline \$0.71 \times 7,000 \text{ gal. per E.Q.U.} = \$4.97 \text{ per E.Q.U.} \end{array}$$

It is my recommendation that the rate for one E.Q.U. be changed from the current \$4.20 to \$4.95 beginning as early in 1981 as this rate change can be implemented.

The current rate structure has been proven to be satisfactory and it is recommended that it remain the same as follows:

- A. Single family dwelling = 1.00 EQU
- B. Multiple family dwellings = $0.72 \times$ no. of single family units
- C. Hotels and motels:
 - 1. No restaurant or kitchen = $0.36 \times$ no. of rooms
 - 2. With Kitchenettes = $0.43 \times$ no. of rooms
 - 3. With restaurants = use (1) then add rates from (D) below
- D. Restaurants:
 - 1. 24 hr. operation = $0.21 \times$ no. of seats
 - 2. 12 hr. or less operation = $0.14 \times$ no. of seats
 - 3. Bar, no food = $0.04 \times$ no. of seats
- E. Schools:
 - 1. No food or showers = $0.04 \times$ no. of student capacity
 - 2. For cafeterias = add to (1) $0.02 \times$ no. of student capacity
 - 3. For showers = add to (1) $0.02 \times$ no. of student capacity
 - 4. Boarding schools = $0.27 \times$ no. of student capacity
- F. Service stations
 - 1. Without wash rack = 1.00 EQU
 - 2. With wash rack = $2.3 \times$ no. wash racks
- G. Shopping centers and stores = $0.35 \times$ no. of thousand of square feet of store space
- H. Travel trailer parks and courts = $0.45 \times$ no. of trailer parking spaces
- I. Churches, assembly halls, theaters, and arenas = $0.01 \times$ no. of seating capacity
- J. Drive In Theater = $0.02 \times$ no. of car spaces
- K. Factory, warehouses, shops, and offices (not including industrial waste) = $0.05 \times$ no. of employees
- L. Hospitals = $0.89 \times$ no. bed spaces
- M. Institutions-Nursing Home = $0.36 \times$ no. of residences
- N. Laundry-coin operated = $0.90 \times$ no. washing machines
- O. Mobile Home Parks = $0.67 \times$ no. lots or spaces
- P. Car Wash = $2.3 \times$ no of bays
- Q. Fast Food Take Out (walk-up or drive-up)
 - 1. Open 12 or more hrs. = $0.10 \times$ no. of employees
 - 2. Open less than 12 hrs. = $0.06 \times$ no. of employees

SUMMARY

A rate increase is being requested to cover the increased cost of operation and the increase in debt retirement due to the issuing of \$8 million worth of revenue bonds to cover the local share of the cost of a new sewage treatment plant and related interceptor lines. This rate increase recommendation is in conformance with the bond covenants, EPA grant requirements, and City and County policy of keeping the sewer fund on a self-sufficient basis.

In contrast to the previous increase which involved a complete restructuring of the rate structure to establish fair and equitable charges for all users, this increase will be a uniform increase for all users. With an increase in the basic unit (E.Q.U.) fee, all rates for all users will be adjusted proportionally.

When compared to other Colorado municipalities the proposed rate appears to be very reasonable. Enclosed in this report is a table comparing the existing rate to other municipalities. Because other municipalities have different rate structures, in some cases the rates were calculated to show an equivalent monthly rate. As can be seen on the table, the rates range from a high of \$9.50 per month in Thornton to a low of \$3.50 per month in Commerce City. The Commerce City rates were last increased in 1977. Two other rates are shown lower than Grand Junction. They were set in 1978 and 1979. The one set in 1978 (Greeley) was scheduled for an increase in 1980. Justification for Grand Junction rates is not being made by comparison with other rates. The point being made is that Grand Junction has been able to maintain very reasonable rates even while undertaking a \$30 million project to construct new sewer facilities.

COMPARISON OF GRAND JUNCTION SEWER
RATE SCHEDULE WITH OTHER COLORADO MUNICIPALITIES

| <u>Municipality</u> | <u>1970 Census Population</u> | <u>1970 Census Persons/Household</u> | <u>Sewer Rate Schedule</u> ⁽¹⁾ | <u>Equivalent Monthly Rate</u> ⁽³⁾ |
|---------------------|-----------------------------------|--|--|---|
| Grand Junction | 20,170 | 2.8 | \$4.20/month | \$4.20/month |
| Arvada | 46,814 | 3.4 | 75 cents/M ⁽²⁾ based on winter water usage | \$7.65/month |
| Boulder | 66,870 | 2.8 | \$3.15 plus 49 cents/M based on average winter month water usage | \$7.40/month |
| Commerce City | 17,407 | 3.6 | \$3.50/month | \$3.50/month |
| Golden | 9,817 | 3.3 | \$5.00 plus 40 cents/M over 9 M of water used during the first quarter each year; quarterly | \$4.45/month |
| Greeley | 38,902 | 3.0 | \$11.70/quarter | \$3.90/month |
| Gunnison | 4,613 | 2.9 | \$5.50/month | \$5.50/month |
| Littleton | 26,466 | 3.3 | \$20.00 semiannually | \$3.35/month |
| Thornton | 13,326 | 3.9 | \$1.05 service charge plus 72 cents/M/month | \$9.50/month |
| Westminster | 19,432 | 3.9 | 90 cents/M, max \$9.00/ month | \$9.00/month |

(1) Sewer Rate Schedule source - Colorado Municipal League, March 1980

(2) M = 1,000 gallons

(3) Equivalent monthly rate based on number of persons per household at assumed water usage of 100 gallons per capita per day for 30 days applied to the given rate schedule.

SERVICE CHARGES—SUMMARY

Sewer service rates and charges enable a sewage collection and treatment utility to spread its costs among system users. Sewer rates and charges typically are based on one of the following formulas:

1. Amount of metered water used
2. Amount of water used during a specific time period, such as January billing, average winter month, etc.
3. Unit rate, based on the number of plumbing fixtures, number of rooms, square footage, etc.
4. Flat rate, a set amount per billing period
5. Type of use, such as residential, commercial and industrial
6. Surcharge for wastes that require special or a high degree of treatment (for commercial/industrial customers)
7. Equivalent residential unit (EQR) schedule. This method expresses multi-family, commercial and industrial types of use in terms of an equivalent residential unit, with a single-family residential unit equal to one EQR.

Survey results indicate that flat rates are widely used by Colorado municipalities as the basis for residential sewer service charges. Seventy-nine percent of the 114 jurisdictions responding to this section use this method. Formulas based on percent of water used as a measure of usage of the collection and treatment system, frequently are modified by basing the charge on the amount of water used during a specific time period. This method is designed to assess charges more equitably, since some water users consume large quantities of water for lawn watering or irrigation, but return very small amounts to the sewage collection system. Thus, charges based on a January water billing, or an average winter month, focus on the amount of water used which is returned to the sewage system.

(continued, next page)

A review of sewer service data collected by the League in 1963, 1973, 1977 and 1979 reflects a continuing trend toward assessing user charges for sewer service. In 1963, of 111 jurisdictions reporting, 77 percent assessed a user charge for sewer service; in 1973, the percentage increased to 92 percent; in 1977, over 95 percent of the 110 jurisdictions levied a service charge for sewer service. In 1979, only two municipalities and two special districts reported that no service charge for sewer service is assessed.

Summary Table 3 indicates the number of jurisdictions which use the various formulas as the basis for sewer service charges. Specific information by jurisdiction on the basis of sewer service charges appears in Table 8, page 132.

SUMMARY TABLE 3. BASIS OF SEWER SERVICE CHARGES*

| | % of water used | | % of water used (specific time period) | | flat rate | | unit rate | | no sewer service charges | | equivalent residential unit (EQR) | surcharge for special treatment |
|-------------------------|------------------|-----------------|--|-----------------|------------------|-----------------|------------------|-----------------|--------------------------|-----------------|-----------------------------------|---------------------------------|
| | Resi- dential | Com- mercial | Resi- dential | Com- mercial | Resi- dential | Com- mercial | Resi- dential | Com- mercial | Resi- dential | Com- mercial | | |
| Number of Jurisdictions | 5 | 18 | 11 | 13 | 90 | 62 | 6 | 15 | 4 | 4 | 8 | 18 |

*Some utilities use more than one formula as the basis of charges.

(continued, next page)

Outside corporate limit rates usually are higher than in-city rates for several reasons:

1. Sewer service to residents of the city tends to increase the city's tax base, whereas service to non-residents does not.
2. The purchase and/or expansion of a municipal sewer utility system frequently requires passage of a bond issue. The bond issue places additional financial burdens on city residents that are not imposed on non-residents.
3. Because of outside users, cities may incur a design and expansion expense which would not otherwise be necessary.

SUMMARY TABLE 4. OUTSIDE CORPORATE LIMIT SEWER SERVICE CHARGES
(as compared with inside rates)

| Number of Jurisdictions | same | 5%-20% more | 25%-45% more | 50%-75% more (1½ to 1-3/4 times) | 100% more (double) | 200% more (3 times) | other | outside service not provided | total # responding |
|-------------------------|------|-------------|--------------|-------------------------------------|-----------------------|------------------------|-------|------------------------------|--------------------|
| | | 19 | 2 | 4 | 16 | 30 | 1 | 4 | 22 |

Jurisdictions included in CML's sewer service survey serve 57,190 sewer connections outside the corporate limits of the individual jurisdictions. Of these, over 50 thousand are residential connections; the remainder are commercial/industrial taps.

Detailed information for each jurisdiction on outside-corporate-limit sewer service charges, special user discount rates, and year rates last increased is included in Table 8, page 132. Table 9, page 138, provides sewer service rate schedules, by jurisdiction, for single-family residential taps inside the corporate limits.

TABLE 9. SERVICE CHARGES - Single-Family Residences (Inside Corporate Limits)

| Municipality | Rate Schedule | Municipality | Rate Schedule |
|-----------------------|--|-------------------------|---|
| Akron | no charge | Fort Morgan | no charge |
| Arvada | 75 cents/M based on winter water usage | Fruita | \$4 first 4M of water used; over 4M - \$1/M; quarterly |
| Ault ^a | \$7.50/quarter | Glendale | 110% of water bill; monthly |
| Aurora | \$3.80/mo. | Golden* | \$5 plus 40 cents/M over 9M of water used during the first quarter each year; quarterly |
| Berthoud | \$18/ quarter | Granby ^a | \$9/mo. |
| Boulder | \$3.15 plus 49 cents/M based on average winter month water usage | Grand Junction* | \$4.20/mo. |
| Brighton | \$8/2 mos. | Greeley* | \$11.70/quarter |
| Brush* | \$3/mo. | Gunnison | \$5.50/mo. |
| Castle Rock* | \$5/quarter | Haxtun | \$4/mo. |
| Cedaredge* | \$5/mo. | Hayden | \$4/mo. |
| Colorado Springs* | \$5.45 first 500 cu. ft. of water used (based on Jan. billing) plus 26 cents/100 cu. ft. over 500 cu. ft. ^b | Idaho Springs* | 1 to 6 rooms - \$21; each addl. room - \$1.50; quarterly |
| Commerce City* | \$3.50/mo. | Johnstown* | \$3.50/mo. |
| Cortez ^a | \$5/mo. | Keenesburg ^a | \$7/mo. |
| Crook | \$4/mo. | Kremmling ^a | \$3/mo. |
| Delta* | \$4/mo. | Lafayette | \$3 plus 40 cents/M based on average winter month water usage |
| Denver* | <u>metered</u> : 95 cents/M of water used during winter billing period; <u>unmetered</u> : 95 cents/M of estimated sewage contribution (based on number of rooms and water-using devices); minimum charge, \$5.19; bimonthly | La Junta | \$9.33 min. (based on water consumption during specific period); new customers: \$11.65; monthly |
| Durango* | \$2.25/mo. | Lakewood ^{a,c} | \$2.25/quarter plus 54 cents/M based on average winter month water usage ^c |
| Eaton* | \$2.25/mo. | Lamar* | \$2/mo. |
| Englewood* | \$12.10 flat rate, quarterly; sewage trtmt. charge \$0.5075/M of water used plus collection system charge \$0.0675/M; \$11 minimum; quarterly | LaSalle* | \$5.25/mo. |
| Florence ^a | \$5.45/mo. | Limon* | \$4/quarter |
| Fort Collins* | \$4.90/mo. | Littleton* | \$20 semiannually |
| Fort Lupton* | \$52/yr. | Longmont* | <u>unmetered</u> : 34.9% of monthly water bill minus \$1.83 water administrative cost, plus \$1.20 sewer administrative cost; <u>metered</u> : 60 cents/M plus \$1.20/month sewer administrative cost |

^a special district or separate agency

^b 1 cu. ft. = 7.5 gallons (\$5.45 first 3750 gallons; approx. 34.67 cents/M over 3750 gallons)

^c increase to 58 cents/M proposed

-- information not provided

M = 1,000 gallons

TABLE 9. SERVICE CHARGES - Single-Family Residences (Inside Corporate Limits) (continued)

| Municipality | Rate Schedule | Municipality | Rate Schedule |
|--------------------------------|---|--------------------|--|
| Loveland* | <u>unmetered</u> : \$38/yr., billed quarterly; <u>metered</u> : 47.5 cents/M of water used, based on winter quarter usage—minimum rate per quarter, \$9.50 | Walsenburg * | \$4/mo. |
| Manitou Springs | <u>unmetered</u> : \$22.50/qtr.; <u>metered</u> : \$7.50/mo. | Westminster * | 90 cents/M of water use (average of use for period 12-15 to 3-15, maximum \$9/mo.) |
| Monte Vista | \$1.90/mo. | Wiley ^a | \$3.50/mo. |
| Montrose* | \$4.47/mo.; <u>metered</u> : 20% of monthly water bill, minimum of \$4.47/mo. | Yuma | \$2/mo. |
| Naturita | \$2.50/mo. | | |
| Oak Creek | \$4/mo. | | |
| Ordway | \$3.15/mo. | | |
| Ovid | <u>commercial</u> : \$5.25 min. plus 20 cents/M of water used over 2M; monthly | | |
| Pierce | \$7/mo. | | |
| Pueblo | 17 cents/M based on winter water usage | | |
| Ramah* | \$1/mo. | | |
| Rangely | \$4.50/mo. | | |
| Rifle* | 60% of water bill (average of two winter quarters is charged for two summer quarters); quarterly | | |
| Salida* | \$6/ quarter | | |
| Sedgwick | \$7.50/mo. | | |
| Silverthorne ^a | EQR basis | | |
| Silverton* | \$13.50/quarter | | |
| Snowmass Village ^{a*} | \$9.60 - less than 0.50 acre; \$10.20 - 0.51 to 1.00 acre; \$11.40 - 1.01 to 3.00 acres; \$13.20 - larger than 3.00 acres | | |
| Steamboat Springs | 45% of water rate | | |
| Thornton | <u>winter</u> (Nov. - Apr.): \$1.05 service charge plus 72 cents/M of water usage; <u>summer</u> (May - Oct.): \$1.05 service charge plus 72 cents/M of average winter month usage; monthly | | |

^a special district or separate agency

-- information not provided
M = 1,000 gallons

TABLE 8

COMPARISON OF GRAND JUNCTION SEWER
RATE SCHEDULE WITH OTHER COLORADO MUNICIPALITIES

| <u>Municipality</u> | <u>1970 Census Population</u> | <u>1970 Census Persons/Household</u> | <u>Sewer Rate Schedule</u> ⁽¹⁾ | <u>Equivalent Monthly Rate</u> ⁽³⁾ |
|---------------------|-----------------------------------|--|--|---|
| Grand Junction | 20,170 | 2.8 | \$4.20/month | \$4.20/month |
| Arvada | 46,814 | 3.4 | 75 cents/M ⁽²⁾ based on winter water usage | \$7.65/month |
| Boulder | 66,870 | 2.8 | \$3.15 plus 49 cents/M based on average winter month water usage | \$7.40/month |
| Commerce City | 17,407 | 3.6 | \$3.50/month | \$3.50/month |
| V-7 Golden | 9,817 | 3.3 | \$5.00 plus 40 cents/M over 9 M of water used during the first quarter each year; quarterly | \$4.45/month |
| Greeley | 38,902 | 3.0 | \$11.70/quarter | \$3.90/month |
| Gunnison | 4,613 | 2.9 | \$5.50/month | \$5.50/month |
| Littleton | 26,466 | 3.3 | \$20.00 semiannually | \$3.35/month |
| Thornton | 13,326 | 3.9 | \$1.05 service charge plus 72 cents/M/month | \$9.50/month |
| Westminster | 19,432 | 3.9 | 90 cents/M, max \$9.00/ month | \$9.00/month |

(1) Sewer Rate Schedule source - Colorado Municipal League, March 1980

(2) M = 1,000 gallons

(3) Equivalent monthly rate based on number of persons per household at assumed water usage of 100 gallons per capita per day for 30 days applied to the given rate schedule.

SERVICE CHARGES—SUMMARY

Sewer service rates and charges enable a sewage collection and treatment utility to spread its costs among system users. Sewer rates and charges typically are based on one of the following formulas:

1. Amount of metered water used
2. Amount of water used during a specific time period, such as January billing, average winter month, etc.
3. Unit rate, based on the number of plumbing fixtures, number of rooms, square footage, etc.
4. Flat rate, a set amount per billing period
5. Type of use, such as residential, commercial and industrial
6. Surcharge for wastes that require special or a high degree of treatment (for commercial/industrial customers)
7. Equivalent residential unit (EQR) schedule. This method expresses multi-family, commercial and industrial types of use in terms of an equivalent residential unit, with a single-family residential unit equal to one EQR.

Survey results indicate that flat rates are widely used by Colorado municipalities as the basis for residential sewer service charges. Seventy-nine percent of the 114 jurisdictions responding to this section use this method. Formulas based on percent of water used as a measure of usage of the collection and treatment system, frequently are modified by basing the charge on the amount of water used during a specific time period. This method is designed to assess charges more equitably, since some water users consume large quantities of water for lawn watering or irrigation, but return very small amounts to the sewage collection system. Thus, charges based on a January water billing, or an average winter month, focus on the amount of water used which is returned to the sewage system.

(continued, next page)

A review of sewer service data collected by the League in 1963, 1973, 1977 and 1979 reflects a continuing trend toward assessing user charges for sewer service. In 1963, of 111 jurisdictions reporting, 77 percent assessed a user charge for sewer service; in 1973, the percentage increased to 92 percent; in 1977, over 95 percent of the 110 jurisdictions levied a service charge for sewer service. In 1979, only two municipalities and two special districts reported that no service charge for sewer service is assessed.

Summary Table 3 indicates the number of jurisdictions which use the various formulas as the basis for sewer service charges. Specific information by jurisdiction on the basis of sewer service charges appears in Table 8, page 132.

SUMMARY TABLE 3. BASIS OF SEWER SERVICE CHARGES*

| | % of water used | | % of water used (specific time period) | | flat rate | | unit rate | | no sewer service charges | | equivalent residential unit (EQR) | surcharge for special treatment |
|-------------------------|-----------------|------------|--|------------|-------------|------------|-------------|------------|--------------------------|------------|-----------------------------------|---------------------------------|
| | Residential | Commercial | Residential | Commercial | Residential | Commercial | Residential | Commercial | Residential | Commercial | | |
| Number of Jurisdictions | 5 | 18 | 11 | 13 | 90 | 62 | 6 | 15 | 4 | 4 | 8 | 18 |

*Some utilities use more than one formula as the basis of charges.

(continued, next page)

Corporate limit rates usually are higher than in-city rates for several reasons:

Service to residents of the city tends to increase the city's tax base, whereas service to non-residents does not.

Purchase and/or expansion of a municipal sewer utility system frequently requires passage of a bond issue. The bond issue places additional financial burden on city residents that are not imposed on non-residents.

Use of outside users, cities may incur a design and expansion expense which would not otherwise be necessary.

TABLE 4. OUTSIDE CORPORATE LIMIT SEWER SERVICE CHARGES
(as compared with inside rates)

| Number of jurisdictions | same | 5%-20% more | 25%-45% more | 50%-75% more (1½ to 1-3/4 times) | 100% more (double) | 200% more (3 times) | other | outside service not provided | total # responding |
|-------------------------|------|-------------|--------------|-------------------------------------|-----------------------|------------------------|-------|------------------------------|--------------------|
| | 19 | 2 | 4 | 16 | 30 | 1 | 4 | 22 | 98 |

Jurisdictions included in CML's sewer service survey serve 57,190 sewer connections outside the corporate limits of the individual jurisdictions. Of these, over 50 percent are residential connections; the remainder are commercial/industrial taps.

Additional information for each jurisdiction on outside-corporate-limit sewer service charges, special user discount rates, and year rates last increased is included in Table 8, page 132. Table 9, page 138, provides sewer service rate schedules, by jurisdiction, for single-family residential taps inside the corporate limits.

TABLE 9. SERVICE CHARGES - Single-Family Residences (Inside Corporate Limits)

| Municipality | Rate Schedule | Municipality | Rate Schedule |
|-----------------------|--|-------------------------|---|
| Akron | no charge | Fort Morgan | no charge |
| Arvada | 75 cents/M based on winter water usage | Fruita | \$4 first 4M of water used; over 4M - \$1/M; quarterly |
| Ault ^a | \$7.50/quarter | Glendale | 110% of water bill; monthly |
| Aurora | \$3.80/mo. | Golden* | \$5 plus 40 cents/M over 9M of water used during the first quarter each year; quarterly |
| Berthoud | \$18/ quarter | Granby ^a | \$9/mo. |
| Boulder | \$3.15 plus 49 cents/M based on average winter month water usage | Grand Junction* | \$4.20/mo. |
| Brighton | \$8/2 mos. | Greeley* | \$11.70/quarter |
| Brush* | \$3/mo. | Gunnison | \$5.50/mo. |
| Castle Rock* | \$5/quarter | Haxtun | \$4/mo. |
| Cedaredge* | \$5/mo. | Hayden | \$4/mo. |
| Colorado Springs* | \$5.45 first 500 cu. ft. of water used (based on Jan. billing) plus 26 cents/100 cu. ft. over 500 cu. ft. ^b | Idaho Springs* | 1 to 6 rooms - \$21; each add'l. room - \$1.50; quarterly |
| Commerce City* | \$3.50/mo. | Johnstown* | \$3.50/mo. |
| Cortez ^a | \$5/mo. | Keenesburg ^a | \$7/mo. |
| Crook | \$4/mo. | Kremmling ^a | \$3/mo. |
| Delta* | \$4/mo. | Lafayette | \$3 plus 40 cents/M based on average winter month water usage |
| Denver* | <u>metered</u> : 95 cents/M of water used during winter billing period; <u>unmetered</u> : 95 cents/M of estimated sewage contribution (based on number of rooms and water-using devices); minimum charge, \$5.19; bimonthly | La Junta | \$9.33 min. (based on water consumption during specific period); new customers: \$11.65; monthly |
| Durango* | \$2.25/mo. | Lakewood ^{a*} | \$2.25/quarter plus 54 cents/M based on average winter month water usage |
| Eaton* | \$2.25/mo. | Lamar* | \$2/mo. |
| Englewood* | \$12.10 flat rate, quarterly; sewage trtmt. charge \$0.5075/M of water used plus collection system charge \$0.0675/M; \$11 minimum; quarterly | LaSalle* | \$5.25/mo. |
| Florence ^a | \$5.45/mo. | Limon* | \$4/quarter |
| Fort Collins* | \$4.90/mo. | Littleton* | \$20 semiannually |
| Fort Lupton* | \$52/yr. | Longmont* | <u>unmetered</u> : 34.9% of monthly water bill minus \$1.83 water administrative cost, plus \$1.20 sewer administrative cost; <u>metered</u> : 60 cents/M plus \$1.20/month sewer administrative cost |

special district or separate agency
 1 cu. ft. = 7.5 gallons (\$5.45 first 3750 gallons; approx. 34.67 cents/M over 3750 gallons)
 increase to 58 cents/M proposed

-- information not provided
 M = 1,000 gallons

TABLE 9. SERVICE CHARGES - Single-Family Residences (Inside Corporate Limits) (continued)

| Municipality | Rate Schedule | Municipality | Rate Schedule |
|--------------------------------|---|--------------------|--|
| Loveland* | <u>unmetered</u> : \$38/yr., billed quarterly; <u>metered</u> : 47.5 cents/M of water used, based on winter quarter usage—minimum rate per quarter, \$9.50 | Walsenburg * | \$4/mo. |
| Manitou Springs | <u>unmetered</u> : \$22.50/qtr.; <u>metered</u> : \$7.50/mo. | Westminster* | 90 cents/M of water use (average of use for period 12-15 to 3-15, maximum \$9/mo.) |
| Monte Vista | \$1.90/mo. | Wiley ^a | \$3.50/mo. |
| Montrose* | \$4.47/mo.; <u>metered</u> : 20% of monthly water bill, minimum of \$4.47/mo. | Yuma | \$2/mo. |
| Naturita | \$2.50/mo. | | |
| Oak Creek | \$4/mo. | | |
| Ordway | \$3.15/mo. | | |
| Ovid | <u>commercial</u> : \$5.25 min. plus 20 cents/M of water used over 2M; monthly | | |
| Pierce | \$7/mo. | | |
| Pueblo | 17 cents/M based on winter water usage | | |
| Ramah* | \$1/mo. | | |
| Rangely | \$4.50/mo. | | |
| Rifle* | 60% of water bill (average of two winter quarters is charged for two summer quarters); quarterly | | |
| Salida* | \$6/ quarter | | |
| Sedgwick | \$7.50/mo. | | |
| Silverthorne ^a | EQR basis | | |
| Silverton* | \$13.50/quarter | | |
| Snowmass Village ^{a*} | \$9.60 - less than 0.50 acre; \$10.20 - 0.51 to 1.00 acre; \$11.40 - 1.01 to 3.00 acres; \$13.20 - larger than 3.00 acres | | |
| Steamboat Springs | 45% of water rate | | |
| Thornton | <u>winter</u> (Nov. - Apr.): \$1.05 service charge plus 72 cents/M of water usage; <u>summer</u> (May - Oct.): \$1.05 service charge plus 72 cents/M of average winter month usage; monthly | | |

^a special district or separate agency

-- information not provided
M = 1,000 gallons