

## Impact Fees for CHCID

In trying to justify a basis of Utility Rates and for establishing of Impact Fees for the CHCID Water District a fundamental factor which must be considered is **community density**. Our current policy of providing one 3/4" x 5/8" meter per acre limits the number of meters to potentially a maximum of 1460 meters. In contrast, in a typical urban communities where density is three homes per acre the potential number of services is 4380 of an area our size. While these numbers can be argued a little, the basic problem is that our costs for infrastructure and operations must be approximately three times the surrounding districts because of the life style we have chosen. To compare and maintain water rates equal to surrounding communities is a the reason finances have been such a problem for CHCID .

As an example let us suppose it costs \$ 2400.00 to create a water main along a one acre street. In our case, that line will serve two residences (one on each side of the street) the cost per household is \$ 1200.00. In the case of three houses per acre the cost is \$ 400.00 per household. This same concept must be used in establishing domestic water rates to cover the cost of water production, maintenance and administration. Let us assume the average water bill is \$ 50.00 a customer per month for service. This would generate \$ 100.00 dollars per acre on our street verses \$ 300.00 per one acre on a street with three houses per acre density.

This example is not an attempt to justify higher density living within our community but simply to demonstrate the falsey of trying to compare our water rates to surrounding communities with higher density.

With this thought in mind let us consider where CHCID is now and where it needs to be going forward. Lets look at some surrounding communities and their service rates.

The following examples illustrate similar water districts and their rate schedules however they do have high density living.

### **H2O Must abide by Arizona Corporation Commission Rules**

(for trailers and Manufactured homes)      5/8" x 3/4" meter

Off Site Reservation Charges: (Impact Fees)	\$ 875.00
Meter Installation Charge:    \$ 285.00	
Monthly Rate: \$ 15.00 meter fee plus	\$ 1.78 per 1000 gal.    0 to 20,000 gallons \$ 2.11 per 1000 gal.    20,001 and over.

---

(for single family structures on small lots)    3/4" meter

Off Site Reservation Charges: (Impact Fees)	\$ 1050.00
Meter Instalation Charge:    \$ 320.00	
Monthly Rate: \$ 18.00 meter fee plus	\$ 1.78 per 1000 gal.    0 to 20,000 gallons \$ 2.11 per 1000 gal.    20,001 and over.

---

(for Single Family Structures on low density large lots)	1" meter
Off Site Reservation Charges: (Impact Fees)	\$ 875.00
Meter Instalation Charge:	\$ 285.00
Monthly Rate: \$ 37.00 meter fee plus	\$ 1.78 per 1000 gal. 0 to 20,000 gallons \$ 2.11 per 1000 gal. 20,001 and over.

---

(for large residences structures / neighborhood commercial)	1-1/2" meter
Off Site Reservation Charges: (Impact Fees)	\$ 3500.00
Meter Instalation Charge:	\$ 545.00
Monthly Rate: \$ 75.00 meter fee plus	\$ 1.78 per 1000 gal. 0 to 20,000 gallons \$ 2.11 per 1000 gal. 20,001 and over.

---

(for large residences structures / neighborhood commercial)	2" meter
Off Site Reservation Charges: (Impact Fees)	\$ 5600.00
Meter Instalation Charge:	\$ 915.00
Monthly Rate: \$ 120.00 meter fee plus	\$ 1.78 per 1000 gal. 0 to 20,000 gallons \$ 2.11 per 1000 gal. 20,001 and over

---

**Florence:**

Monthly Base Meter Charge	\$ 16.67 for 5/8" x 3/4" Meter
Base Volume Charge <u>Inside</u>	\$ 1.19 per 1000 till 10,000
<u>Municipality</u>	\$ 1.65 per 1000 till 10,001 – 18,700
	\$ 2.93 per 1000 18,700 – over

Monthly Base Meter Charge	\$ 21.67 for 5/8" x 3/4" Meter
Base Volume Charge <u>Outside</u>	\$ 1.52 per 1000 till 10,000
<u>Municipality</u>	\$ 2.11 per 1000 till 10,001 – 18,700
	\$ 3.74 per 1000 18,700 – over

---

## **Florence Continued:**

Monthly base charges for different sized Meters.

<u>Meter Size</u>	<u>Meter Charge Inside</u>	<u>Meter Charge Outside</u>
5/8" x 3/4"	\$ 16.67	\$ 21.67
1"	\$ 27.79	\$ 36.12
2"	\$ 111.15	\$ 144.50
3" Compound	\$ 177.85	\$ 231.20
3" Turbine	\$ 194.52	\$ 247.87
4" Compound	\$ 277.88	\$ 361.25
4" Turbine	\$ 350.13	\$ 433.50
6" Compound	\$ 555.77	\$ 722.50
6" Turbine	\$ 778.07	\$ 944.80

The Town of Florence has adopted Impact Fees which are based upon the square footage of the structure. Commercially this amounts to \$ 6.32 per. square foot while a residential flat rate charge is \$ 11,427.00 inside the municipality and \$ 6,404.00 outside the core.

## **Casa Grande:**

Monthly Base Meter Charge	\$ 10.48 for 5/8" x 3/4" Meter
Base Volume Charge	\$ .10 per 100 gal. till 3000 gal
	\$ .14896 100 gal. 3001 till 10,000
	\$ .16500 100 gal 10,001 -- +

## **Apache Junction:**

Monthly Base Meter Charge	\$ 12.54 for 5/8" x 3/4" Meter
Base Volume Charge	\$ .19688 per 100 gal. till 10,000 gal
	\$ .24610 100 gal. 10,001 till 25,000
	\$ .29532 100 gal 25,001 -- +

## **Coolidge:**

Monthly Base Meter Charge	\$ 10.90 for 5/8" x 3/4" Meter
Base Volume Charge	\$ .155 per 100 gal. till 3000 gal
	\$ .196 per 100 gal. 3001 till 10,000
	\$ .224 per 100 gal 10,001 -- +

**Casa Grande, Apache Junction and Coolidge** are serviced by divisions of the Arizona Water Company and as such are a for profit company not able to take advantage of Impact Fees. For this reason their rates are considerably higher since money for expansion must be derived from the monthly minimum (meter fee) and the charge for the sale of water itself. The following is the monthly meter charge for the city of:

Coolidge, Apache Junction and Casa Grande.

Meter Size	Coolidge	Apache Junction	Casa Grande
5/8" x 3/4"	\$ 10.90	\$ 12.54	\$ 10.48
1"	\$ 27.25	\$ 34.30	\$ 25.20
2"	\$ 87.20	\$ 120.20	\$ 63.10
3"	\$ 174.40	\$ 236.03	\$ 105.15
4"	\$ 272.50	\$ 480.25	\$ 210.25
6"	\$ 545.00	\$ 774.01	\$ 367.90

Let us now shift gears and look at Rates and Impact Fees of several large metropolitan water districts in the valley namely Phoenix, Gilbert and Queen Creek to see how they approached the cost of the major growth experienced in the last years.

**Phoenix:**

Meter Size	Inside City	Outside City	Per Unit Charge	Inside	Outside
5/8"	\$ 4.64	\$ 6.96	Dec., Jan., Feb., Mar.,	\$1.83	\$ 2.75
3/4"	\$ 4.73	\$ 7.10	Apr., May, Oct., Nov.,	\$ 2.20	\$ 3.30
1"	\$ 5.21	\$ 7.82	Jun., Jun., Jul., Sept.	\$ 2.81	\$ 4.22
1-1/2"	\$ 7.85	\$ 11.78			
2"	\$ 9.00	\$ 13.50			
3"	\$ 29.81	\$ 44.71			
4"	\$ 37.09	\$ 55.64			
6"	\$ 44.38	\$ 66.57			

**Gilbert:**

Meter Size	Inside City	Outside City	Per Unit Charge	Inside
3/4"	\$ 13.80	\$ 13.80	0 to 10,000 gal.	\$ 1.02 per 1,000
1"	\$ 20.65	\$ 20.65	10,001 to 20,000	\$ 1.08 per 1,000
1-1/2"	\$ 39.00	\$ 39.00	20,001 to 30,000	\$ 1.43 per 1,000
2"	\$ 68.60	\$ 68.60	30,001 and more	\$ 1.70 per 1,000
3"	\$ 110.00	\$ 110.00		
4"	\$ 168.30	\$ 168.30		
6"	\$ 466.20	\$ 466.20		

**Queen Creek:**

Meter Size	Meter Fee			
3/4"	\$ 15.50	0 to 10,000 gal.	\$ 1.50	per 1,000
1"	\$ 26.00	10,001 to 20,000	\$ 2.00	per 1,000

1-1/2"	\$ 39.00	20,001 to 30,000	\$ 2.50	per 1,000
2"	\$ 65.00			
3"	\$ 155.00			
4"	\$ 258.00			
6"	\$ 706.00			

---

## CHCID:

Meter Size	Minimum Billing	Additional Fees.
5/8" x 3/4"	\$ 23.75 for up to 3,000 gal	\$ 3.05 per 1000 beyond 3000 gal.

---

With this information let us compare the price of buying 25,000 gal from each water provider. Based upon a 5/8" x 3/4" residential Meter.

	Meter charge	Water Usage	Total Bill
H2O	\$ 18.00	\$ 47.15	\$ 64.15
Florence	\$ 16.67	\$ 29.68	\$ 46.35
Coolidge	\$ 10.90	\$ 51.97	\$ 62.87
Apache Junction	\$ 12.54	\$ 56.60	\$ 69.14
Casa Grande	\$ 10.48	\$ 38.18	\$ 48.66
Phoenix			
Gilbert	\$ 13.80	\$ 28.15	\$ 41.95
Queen Creek	\$ 15.50	\$ 48.00	\$ 60.50
CHCID	\$ 23.75 (incl. 3000 gal)	\$ 67.10	\$ 90.85

Looking at the above rates it appears that CHCID rates are out of line with surrounding water districts. However look closer to **the cash flow generated** and consider that all these communities have a density of three houses per acre. When this is factored into the equation most all of the other communities have three times the **cash flow per acre** to cover operating costs. It is no wonder CHCID rates are so high yet we have such a difficult time remaining solvent.

Now lets talk about impact fees:

Most communities have recognized the need for impact fees because they recognize that their cash flow is not strong enough to finance the expansion of infrastructure from the current revenue stream. It is only after the buildings are built and the water is sold that revenue begins to come in. The other way of achieving financing is by floating municipal bonds. The problem with this method of finance is you have to have a strong enough cash flow for debt service. The District does have two WIFA loans at present however doesn't have the cash flow to justify any further debt. Secondly, this finance method is great in financing where old and new customers are the beneficiaries of the loan or are served equally. In my opinion expansion is an expense which should be borne by those who should benefit from its creation the new residents or customers within the community.

## Methodology

The District's boundaries have been reasonably well established and it is unlikely that the District will annex additional land mass or take over any adjacent acreage. It is likely however that two 20-acre tracts that have opted out of the District will eventually become part of the service area specifically section 31 blocks 23 and 24. Therefore in doing usage calculations these areas should be included.

1. The establishment of one ¾" x 5/8" meter per acre as a unit of measure appears to be accepted, and without a municipal sewerage system, could receive the endorsement of Maricopa County Department of Environmental Quality.
2. The District needs to consider the additional impact of residents who elect not to take advantage of flood irrigation but rather elect the higher cost of using Domestic Water for Landscape watering. Evidence has shown that residential properties who irrigate using domestic water utilize larger quantities of potable water which requires additional capacity for purifying, pumping and storage which also increases operating cost to the District.
3. A careful study needs to be made of commercial properties for several reasons:
  - a. Commercial customers may actually use less water than the average residential customers however the GPM per hour usage during certain periods of the day could create a greater demands on the system.
  - b. Currently a large portion of the Riggs Road corridor (Recker thru Sossaman) and the (Power and San Tan) "T" have yet to be developed. In reviewing a comparison of Domestic verses Commercial customers it appears that residential customers utilize an average of verses commercial:

### Residential:

- |                     |                          |
|---------------------|--------------------------|
| i. Household of 2   | 200 gal per day per acre |
| ii. Household of 3  | 300 gal per day per acre |
| iii. Household of 4 | 400 gal per day per acre |
| iv. Household of 5  | 500 gal per day per acre |
| v. Household of 6   | 600 gal per day per acre |

### Commercial Bldg.

- |                      |                                   |
|----------------------|-----------------------------------|
| vi. Single Occupant  | 650 to 1400 gal per day per acre  |
| vii. Double Occupant | 2500 to 4700 gal per day per acre |
| viii. Multi Occupant | 1000 to 1800 gal per day per acre |

- c. Some domestic water providers have established a commercial meter rate to meet this additional cost. Some have stipulated that all sprinkler irrigation or irrigation using treated water pay a premium price.

IT SHOULD BE NOTED THAT SEVERAL OF THE ABOVE ARE RATES OF DEVISIONS OF THE ARIZONA WATER COMPANY WHICH DOESN'T HAVE IMPACT FEES.

**Lets look at CHCID's Current New Service Charges**

**Residential 5/8' x 3/4" Service Charges.**

**The Charge is \$ 5000.00**

<b>Meter Size</b>	<b>Meter Only</b>	<b>System Development</b>	<b>Resource Development</b>	<b>Total</b>
3/4"	\$ 115.00	\$ 3500.00	\$ 1385.00	\$ 5000.00
1"***	\$ 165.00	\$ 4500.00	\$ 2335.00	\$ 7000.00

**\*\*\* Only if they have a Fire Marshall Approved Residential Fire Sprinkler System**

**Lets look at What If The Residential Base Rate Stayed the Same (\$ 5,000.) However We Allowed 1 1/2" & 2" Meters and Used the AWWA Factors for Different Sizes**

<b>Meter Size</b>	<b>AWWA Flow Factor</b>	<b>System Meter</b>	<b>System Development</b>	<b>Resource Development</b>	<b>Total</b>
3/4"	1	\$ 115.00	\$ 3,500.00	\$ 1,385.00	\$ 5,000.00
1"***	2.5	\$ 165.00	\$ 4,800.00	\$ 2,535.00	\$ 7,500.00
1 1/2"	5	\$ 575.00	\$ 7,500.00	\$ 5,000.00	\$ 12,500.00
2"	8	\$ 920.00	\$ 28,000.00	\$ 5,000.00	\$ 40,000.00

It does not appear that many water districts are following a particular pattern such as using the multiplier as indicated in the AWWA chart. It is also important to note some cities and towns have impact fees over and above their meter fees. This format is not available to CHCID.

It should be noted however that in the case of Oro Valley, Arizona the Engineer did adhere to the AWWA capacity ratios.

**What If We go to a Commercial Rate Based on the current Residential Rate. However we include up to 1½" & 2" Meters and Used the AWWA Factors for Different Sizes**

<b>Meter Size</b>	<b>Meter Only</b>	<b>System Development</b>	<b>Resource Development</b>	<b>Total</b>
¾"	\$ 115.00	\$ 5600.00	\$ 2285.00	\$ 8,000.00
1"***	\$ 165.00	\$ 14,000.00	\$ 5,835.00	\$ 20,000.00
1 ½"	\$ 575.00	\$ 28,000.00	\$ 11,425.00	\$ 40,000.00
2"	\$ 920.00	\$ 44,800.00	\$ 18,280.00	\$ 64,000.00

**What If We go to a Fire Sprinkler Rate Based on the current Residential Rate. However we include up to 1½" & 2" Meters and Used the AWWA Factors for Different Sizes**

<b>Meter Size</b>	<b>Meter Only</b>	<b>System Development</b>	<b>Resource Development</b>	<b>Total</b>
¾"	\$ 0	\$ 5600.00	\$ 2285.00	\$ 7885.00
1"***	\$ 0	\$ 14,000.00	\$ 5,835.00	\$ 19835.00
1 ½"	\$ 0	\$ 28,000.00	\$ 11,425.00	\$ 39425.00
2"	\$ 0	\$ 44,800.00	\$ 18,280.00	\$ 63080.00
3"	\$ 0	\$		\$ 80,000.00
4"	\$ 0			\$ 125,000.00



**TABLE F-3**

**Option 2 - Phase-In of the  
Alternative Water Resources Development Impact Fee**

**AWRDIF Example Implementation Schedule**

**The Town of Oro Valley, Arizona  
Water Utility Impact Fee Analysis**

	<b>AWWA Meter Capacity Ratio</b>	<b>AWRDIF Year 2007</b>	<b>AWRDIF Year 2008</b>	<b>AWRDIF Year 2009</b>
<b>Single Family Residential (per meter size)</b>				
¼-inch	1.0	\$2,061	\$3,621	\$5,182
¾-inch	1.5	3,090	5,430	7,770
1-inch	2.5	5,150	9,050	12,960
1½-inch	5.0	10,300	18,110	25,910
2-inch	8.0	16,490	28,970	41,460
<b>Multifamily Residential (per unit)</b>				
Per unit	NA	\$990	\$1,740	\$2,490
<b>Commercial and Industrial (per meter size)</b>				
¼-inch	1.0	\$3,300	\$5,790	\$8,290
¾-inch	1.5	4,950	8,690	12,440
1-inch	2.5	8,250	14,480	20,730
1½-inch	5.0	16,500	28,950	41,450
2-inch	8.0	26,400	46,320	66,320
3-inch	16	52,800	92,640	132,640
4-inch	25	82,500	144,750	207,250
6-inch	50	165,000	289,500	414,500
8-inch	80	264,000	463,200	663,200
<b>Irrigation (non-turf) (per meter size)</b>				
¼-inch	1.0	\$3,500	\$6,160	\$8,810
¾-inch	1.5	5,250	9,240	13,220
1-inch	2.5	8,750	15,400	22,030
1½-inch	5.0	17,500	30,800	44,050
2-inch	8.0	28,000	49,280	70,480
3-inch	16	56,000	98,560	140,960
4-inch	25	87,500	154,000	220,250
6-inch	50	175,000	308,000	440,500
8-inch	80	280,000	492,800	704,800
<b>Turf Uses (per acre)</b>				
All Turf Uses	NA	\$23,100	\$40,600	\$58,000