SUPPORT DOCUMENTATION

UTILITY PROVIDER RATES AND CHARGES

HOUSING AUTHORITY OF THE CITY OF MCALLEN, TX

(Vine Terrace)

RAD PBV

Utility Providers Residential Rates and Charges
As of November 2020

INITIAL 2020

ELECTRICITY

Source: CPL Retail Energy

800-322-5563 www.cplretailenergy.com*

Year Round		Price Protection Plan
Base Charge	Per Month	$4.95
AEP Texas Central Delivery Charges	Per Month	$4.27
Total Monthly Charge	Per Month	**$9.22**
	Tiers*	**All**
Energy Charge	Per KWH	0.066
AEP Texas Central Delivery Charges	Per KWH	0.04293
Total Energy Charges	Per KWH	**0.10893**
Public Utility Gross Receipts Tax	% of Total	0.1667%
Misc Gross Receipts Tax (pop > 10000)	% of Total	1.997%
City Tax	% of Total	2%
Total Taxes	% of Total	**4.1637%**

NATURAL GAS

Source: Texas Gas Service

800-700-2089 www.texasgasservice.com*

Year Round		Rio Grande Valley-RS 10
Customer Charge	Per Month	**$17.02**
	Tiers*	**All**
Energy Charge	Per CCF	0.53863
Energy Efficiency Program Rate	Per CCF	0.0292
Pipeline Integrity Testing (PIT) Surcharge	Per CCF	0.04128
Cost of Gas	Per CCF	0.35001
Total Energy Charges	Per CCF	**0.95912**
Public Utility Gross Receipts Tax	% of Total	0.1667%
Misc Gross Receipts Tax (pop > 10000)	% of Total	1.997%
City Tax	% of Total	2%
Franchise Fee	% of Total	5%
Total Taxes	% of Total	**9.1637%**

WATER, SEWER AND TRASH COLLECTION

Source: McAllen Public Utility

956-681-1600/956-681-4000 www.mcallenpublicutility.com & Call

Water			
Water Base Fee	Per Month	**$9.95**	
	Tiers*	**0-7999**	**8000-12999**
Water Rate*	Per 1000 Gallons	**$1.45**	**$1.75**

Continued...

HOUSING AUTHORITY OF THE CITY OF MCALLEN, TX

(Vine Terrace)

RAD PBV

Utility Providers Residential Rates and Charges
As of November 2020

INITIAL 2020

McAllen Public Utility continued...

Sewer		
Sewer Base Fee	Per Month	**$12.00**
Sewer Rate	Per 1000 Gallons	**$1.70**
Trash Collection (City of McAllen)		
Garbage Collection & Removal	Per Month	$14.50
Brush Collection Rate	Per Month	$4.86
Recycle Fee	Per Month	$2.00
Total Monthly Charges	Per Month	**$21.36**
Sales Tax	% of Total	**8.25%**

UTILITY PROVIDER DOCUMENTATION

Public Utility Gross Receipts Assessment

A fee is imposed on each public utility within the jurisdiction of the Public Utility Commission.

Rate Details and Other Information

Rates

Public Utility Gross Receipts Tax:

1/6 of 1% (.001667) of gross receipts from rates charged to the ultimate customers in Texas.

Miscellaneous Gross Receipts Tax	Percentage of gross receipts from business done in incorporated cities and towns, according to population: • 1,000 to 2,499 = .581% (.00581) • 2,500 to 9,999 = 1.07% (.0107) • 10,000 or more = 1.997% (.01997)

Listing of Cities with sales tax for electricity and natural gas - http://www.window.state.tx.us/taxinfo/utility/gas_elec.html

For individual city rates – www.window.state.tx.us/taxinfo/local/city.html

http://www.window.state.tx.us/taxinfo/audit/utility/ch3.htm#nontaxableutil

Nontaxable Utilities

The following types of utilities are exempt from taxation under the Miscellaneous Gross Receipts Tax:

- A plant or utility used for distribution but who does not make retail sales to the ultimate consumer within an incorporated city or town in this state. (*Tax Code, Sec. 182.021*)
- **Municipal utilities:**
  Any utility owned and operated by any city or town, county, water improvement district or conservation district. (*Tax Code, Sec. 182.026*)
- **Co-ops:**
  A utility organized under the "Electric Cooperative Corporation Act" is exempt. (*Miscellaneous Tax Rule. 3.52*)

Google

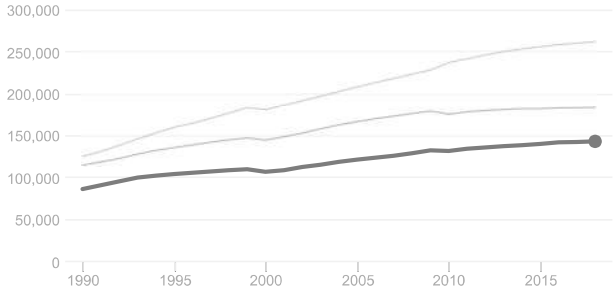
mcallen tx population

All News Images Maps Shopping More Settings Tools

About 1,120,000 results (0.82 seconds)

McAllen / Population

143,433 (2018)



Explore more

Sources include: United States Census Bureau Feedback

People also ask

- Why is McAllen Texas so cheap?
- Is McAllen Texas Safe?
- What is McAllen Texas known for?
- How far is McAllen Texas from the Mexican border?

Feedback

en.wikipedia.org › wiki › McAllen,_Texas

McAllen, Texas - Wikipedia

Jump to **Demographics** — McAllen is about 70 mi (110 km) west of the Gulf of Mexico. As of 2019, McAllen's population was estimated to be **143,268**.

County: Hidalgo **State:** Texas
Area code(s): 956 **Elevation:** 121.4 ft (37.1 m)

Hidalgo County, Texas · Timeline of McAllen, Texas · Category:McAllen, Texas

www.census.gov › quickfacts › mcallencitytexas

U.S. Census Bureau QuickFacts: McAllen city, Texas

McAllen city, **Texas**. QuickFacts provides statistics for all states and counties, and for cities and towns with a **population** of 5,000 or more.

worldpopulationreview.com › us-cities › mcallen-tx-po...

McAllen, Texas Population 2020 (Demographics, Maps, Graphs)

McAllen Demographics. According to the most recent ACS, the racial composition of **McAllen** was: White: 78.38%; Other race: 16.57%; Asian ...

datausa.io › profile › geo › mcallen-tx

McAllen, TX | Data USA

McAllen, **TX** is home to a **population** of 142k people, from which N/A% are citizens. As of N/A, N/A% of **McAllen**, **TX** residents were born outside of the country ...

McAllen

City in Texas

McAllen is a city in southern Tex
& Science has interactive exhibit
European paintings. To the south
Revival mansion surrounded by v
1930s former post office, the Mc
history displays. McAllen's many
to large Town Lake. — Google

Points of interest

Quinta Mazatlan | Basilica Of Our Lady of San J... | Inte Mus Art..

Population elsewhere

Hidalgo County
Edinburg, Texas
Harlingen, Texas

People also search for

Brownsville | Laredo | Edir

Name	Local Code	Local Rate	Total Rate
Maud	2019036	.015000	.082500
Bowie Co	4019009	.005000	
Mauriceville			.067500
Orange Co	4181001	.005000	
Maurin			.067500
Gonzales Co	4089004	.005000	
Maxdale			.067500
Bell Co	4014004	.005000	
Maxey			.067500
Lamar Co	4139004	.005000	
Maxwell			.067500
Caldwell Co	4028008	.005000	
Maydelle			.067500
Cherokee Co	4037007	.005000	
Mayfield			.077500
Hill Co	4109000	.005000	
Hill Co ESD 2-A	5109527	.010000	
Maypearl (Ellis Co)	2070087	.020000	.082500
Maysfield			.067500
Milam Co	4166000	.005000	
McCoy			.067500
Atascosa Co	4007003	.005000	
Mc Dade			.067500
Bastrop Co	4011007	.005000	
Mc Gregor	2161112	.015000	.082500
McLennan Co	4161005	.005000	
McAdoo			.067500
Dickens Co	4063004	.005000	
McAllen (Hidalgo Co)	2108056	.020000	.082500
McBeth			.067500
Brazoria Co	4020006	.005000	
McCamey (Upton Co)	2231029	.015000	.077500
McClanahan			.067500
Falls Co	4073002	.005000	
McFaddin			.067500
Victoria Co	4235007	.005000	
McKinney (Collin Co)	2043045	.020000	.082500
McLean (Gray Co)	2090029	.020000	.082500
McLendon Chisholm (Rockwall Co)	2199065	.020000	.082500
McMahan			.067500
Caldwell Co	4028008	.005000	
McNeil			.067500
Caldwell Co	4028008	.005000	
McNeil (Travis Co)			.072500
Austin MTA	3227999	.010000	
McQueeney			.067500
Guadalupe Co	4094007	.005000	
Meador Grove			.067500
Bell Co	4014004	.005000	
Meadow	2223029	.010000	.077500
Terry Co	4223001	.005000	
Meadowlakes (Burnet Co)			.062500
Meadows Place (Fort Bend Co)	2079168	.020000	.082500
Medicine Mound			.067500
Hardeman Co	4099002	.005000	
Medina			.067500
Bandera Co	4010008	.005000	
Meeker			.067500
Jefferson Co	4123002	.005000	
Meeks			.067500
Bell Co	4014004	.005000	
Megargel	2005041	.010000	.077500
Archer Co	4005005	.005000	
Melissa (Collin Co)	2043170	.020000	.082500
Melrose (Nacogdoches Co)			.072500
Nacogdoches Co Hosp Dist	5174509	.010000	
Melvin	2160024	.010000	.080000
McCulloch Co	4160006	.005000	
McCulloch Co Hosp Dist	5160505	.002500	
Memphis (Hall Co)	2096014	.020000	.082500
Menard	2164011	.015000	.082500
Menard Co	4164002	.005000	
Mendoza			.067500
Caldwell Co	4028008	.005000	
Menlow			.077500
Hill Co	4109000	.005000	
Hill Co ESD 2-A	5109527	.010000	
Mentz			.067500
Colorado Co	4045007	.005000	
Mercedes (Hidalgo Co)	2108038	.020000	.082500
Mercury			.070000
McCulloch Co	4160006	.005000	
McCulloch Co Hosp Dist	5160505	.002500	
Mereta			.067500
Tom Green Co	4226008	.005000	
Meridian	2018028	.015000	.082500
Bosque Co	4018000	.005000	
Merit			.067500
Hunt Co	4116001	.005000	
Merkel (Taylor Co)	2221021	.020000	.082500
Mertens	2109117	.010000	.082500
Hill Co	4109000	.005000	
Hill Co ESD 2	5109518	.005000	
Mertzon (Irion Co)	2118018	.010000	.072500
Mesquite (Dallas Co)	2057039	.020000	.082500
Mesquite (Kaufman Co)	2057039	.020000	.082500
Mexia (Limestone Co)	2147013	.020000	.082500
Miami (Roberts Co)	2197012	.020000	.082500

Electricity Facts Label (EFL)
CPL Retail Energy™
Price Protection Plan™ 12 – Fixed
American Electric Power - Texas Central Service Area
11/3/2020

<table>
<tr><td rowspan="3">Electricity Price</td><td>Average Monthly Use</td><td>500 kWh</td><td>1,000 kWh</td><td>2,000 kWh</td></tr>
<tr><td>Average Price per kWh</td><td>12.7¢</td><td>11.8¢</td><td>11.4¢</td></tr>
<tr><td colspan="4">Your actual average price for electricity may vary according to your exact monthly usage. This price disclosure is an example of the total average price for electric service reflecting all American Electric Power - Texas Central's recurring charges and is based on the following:

Energy Charge: 6.6¢ per kWh

Base Charge: $4.95

American Electric Power - Texas Central Delivery Charges:
$4.27 per month
4.293¢ per kWh

The average price per kWh includes the PUC Assessment. Prices are exclusive of state and local sales taxes and the Gross Receipts Reimbursement.

You may be subject to a special charge from American Electric Power - Texas Central that is not included in the total average price for electric service. If you are subject to a TDU special charge, you may contact us at 1-866-322-5563 for more information regarding the price and applicability of the charge.</td></tr>
<tr><td>Other Key Terms and Questions</td><td colspan="4">See Terms of Service document for a listing of fees, deposit policy, pricing for a default month-to-month renewal product, and other terms.</td></tr>
<tr><td rowspan="6">Disclosure Chart</td><td colspan="2">Type of Product</td><td colspan="2">Fixed Rate Product</td></tr>
<tr><td colspan="2">Contract Term</td><td colspan="2">12 months</td></tr>
<tr><td colspan="2">Do I have a termination fee or any fees associated with terminating service?</td><td colspan="2">Yes, $135.00</td></tr>
<tr><td colspan="2">Can my price change during contract period?</td><td colspan="2">Yes</td></tr>
<tr><td colspan="2">If my price can change, how will it change, and by how much?</td><td colspan="2">Your price may vary from the price in this EFL solely to reflect actual changes in TDU Delivery Charges, TDU Surcharges, changes to the Electric Reliability Council of Texas or Texas Regional Entity administrative fees charged to loads, or changes resulting fromfederal, state or local laws or regulatory actions that impose new or modified fees or costs that are outside our control. Please refer to the Terms of Service for more information.</td></tr>
<tr><td colspan="2">What other fees may I be charged?</td><td colspan="2">Charges for required, nonrecurring fees will be listed as a separate line item on your monthly bill. Please refer to the "Pricing," "Billing and Payment Terms," and "Product Type" sections within the Terms of Service, for more detailed information.</td></tr>
</table>

RESIDENTIAL SERVICE RATE

APPLICABILITY

Applicable to a residential customer in a single dwelling, or in a dwelling unit of a multiple dwelling or residential apartment, for domestic purposes. A residential consumer includes an individually-metered residential unit or dwelling that is operated by a public housing agency acting as an administrator of public housing programs under the direction of the U.S. Department of Housing and Urban Development. This rate is only available to full requirements customers of Texas Gas Service Company, a Division of ONE Gas, Inc.

TERRITORY

The Rio Grande Valley Service Area includes the incorporated areas of Alamo, Alton, Brownsville, Combes, Donna, Edcouch, Edinburg, Elsa, Harlingen, Hidalgo, La Feria, La Joya, La Villa, Laguna Vista, Los Fresnos, Lyford, McAllen, Mercedes, Mission, Palm Valley, Palmhurst, Palmview, Penitas, Pharr, Port Isabel, Primera, Progreso, Rancho Viejo, Raymondville, Rio Hondo, San Benito, San Juan, Santa Rosa, and Weslaco, Texas.

COST OF SERVICE RATE

During each monthly billing period:

A Customer Charge per meter per month of	$17.02 plus
All Ccf @	$0.53863 per Ccf

OTHER ADJUSTMENTS

Cost of Gas Component: The basic rates for cost of service set forth above shall be increased by the amount of the Cost of Gas Component for the billing month computed in accordance with the provisions of Rate Schedule 1-INC.

Weather Normalization Adjustment: The billing shall reflect adjustments in accordance with the provisions of the Weather Normalization Adjustment Clause, Rate Schedule WNA.

Energy Efficiency Program: Adjustments in accordance with the provisions of the Energy Efficiency Program, Rate Schedule 1EE, if applicable.

Excess Deferred Income Taxes Rider: The billing shall reflect adjustments in accordance with provisions of the Excess Deferred Income Taxes Rider, Rate Schedule EDIT-Rider.

Pipeline Integrity Testing Rider: The billing shall reflect adjustments in accordance with provisions of the Pipeline Integrity Testing Rider, Rate Schedule PIT.

Rate Schedule RCE: Adjustments in accordance with provisions of the Rate Case Expense Surcharge Rider.

Taxes: Plus applicable taxes and fees (including franchises fees) related to above.

CONDITIONS

Subject to all applicable laws and orders, and the Company's rules and regulations on file with the regulatory authority.

ENERGY EFFICIENCY PROGRAM RATE

A. APPLICABILITY

The Energy Efficiency Program ("EEP") rate, calculated pursuant to Rate Schedule EEP, shall apply to the following rate schedules listed below for all incorporated areas served by the Company in its Rio Grande Valley Service Area which includes the incorporated areas of Alamo, Alton, Brownsville, Combes, Donna, Edcouch, Edinburg, Elsa, Harlingen, Hidalgo, La Feria, La Joya, La Villa, Laguna Vista, Los Fresnos, Lyford, McAllen, Mercedes, Mission, Palm Valley, Palmhurst, Palmview, Penitas, Pharr, Port Isabel, Primera, Progreso, Rancho Viejo, Raymondville, Rio Hondo, San Benito, San Juan, Santa Rosa, and Weslaco, Texas.

B. CURRENT EEP RATE

Rate Schedule	Customer Class	*Monthly EEP Rate
10	Residential Service	$ 0.0292 per Ccf
20	Commercial Service	$ 0.0023 per Ccf

*The Energy Efficiency Rate will change every three years pursuant to Rate Schedule EEP.

Supersedes Rate Schedule Dated
October 18, 2017

Meters Read On and After
November 19, 2019
(Billing implementation November 25, 2019)

PIPELINE INTEGRITY TESTING (PIT) SURCHARGE RIDER

A. APPLICABILITY

The Pipeline Integrity Testing Surcharge (PIT) rate as set forth in Section (B) below is pursuant to Rate Schedule PIT. This rate shall apply to the following rate schedules of Texas Gas Service Company, a Division of ONE Gas, Inc. in the incorporated and unincorporated areas of the Rio Grande Valley Service Area (RGVSA): 10, 20, 30, 40, T-1, 1Z, 2Z, 3Z, 4Z, and T-1-ENV.

B. PIT RATE

$0.04128 per Ccf

This rate will be in effect until all approved and expended pipeline integrity testing expenses are recovered under the applicable rate schedules.

C. OTHER ADJUSTMENTS

Taxes: Plus applicable taxes and fees (including franchise fees) related to above.

D. CONDITIONS

Subject to all applicable laws and orders, and the Company's rules and regulations on file with the regulatory authority.

Texas Gas Service
Cost of Gas - $/Mcf
November 2020

	November 2020	October 2020	Change from last month	November 2019	Change from last year
Central Texas					
Austin - Inc.	3.8077	3.0789	0.7288	2.9538	$0.8539
Cedar Park - Inc.	3.8077	3.0789	0.7288	2.9538	$0.8539
Westlake Hills - Inc.	3.8077	3.0789	0.7288	2.9538	$0.8539
Sunset Valley - Inc.	3.8077	3.0789	0.7288	2.9538	$0.8539
Rollingwood - Inc.	3.8077	3.0789	0.7288	2.9538	$0.8539
Kyle - Inc.	3.8077	3.0789	0.7288	2.9538	$0.8539
Dripping Springs - Inc.	3.8077	3.0789	0.7288	2.9538	$0.8539
Bee Cave - Inc.	3.8077	3.0789	0.7288	2.9538	$0.8539
Lakeway - Inc.	3.8077	3.0789	0.7288	2.9538	$0.8539
Austin, Cedar Park & Westlake - Env.	3.7776	3.1365	0.6411	2.8443	$0.9333
Kyle/Buda - Env.	3.7776	3.1365	0.6411	2.8443	$0.9333
Dripping Springs - Env.	3.7776	3.1365	0.6411	2.8443	$0.9333
South Texas					
STX - Inc.	3.8285	3.0957	0.7328	2.9699	$0.8586
STX - Env.	3.7981	3.1535	0.6446	2.8598	$0.9383
West Texas					
El Paso - Inc.	3.1609	2.4465	0.7144	2.3569	$0.8040
Vinton - Inc.	3.1609	2.4465	0.7144	2.3569	$0.8040
Clint - Inc.	3.1609	2.4465	0.7144	2.3569	$0.8040
Anthony - Inc.	3.1609	2.4465	0.7144	2.3569	$0.8040
Socorro - Inc.	3.1609	2.4465	0.7144	2.3569	$0.8040
Horizon City - Inc	3.1609	2.4465	0.7144	2.3569	$0.8040
San Elizario - Inc	3.1609	2.4465	0.7144	2.3569	$0.8040
El Paso, Vinton, Clint, Anthony, Socorro, S.Elizario & Horizon City - Env.	3.1206	2.4465	0.6741	2.3282	$0.7924
Fort Bliss	3.6090	2.7933	0.8157	2.6910	$0.9180
Dell City - Inc.	2.6957	1.9925	0.7032	1.2070	$1.4887
Dell City - Env.	2.6957	1.9925	0.7032	1.2070	$1.4887
Monahans, Wink, Wickett - Inc.	3.3305	2.5777	0.7528	2.4833	$0.8472
Barstow - Inc.	3.2880	2.5777	0.7103	2.4833	$0.8047
Pyote - Inc.	3.3305	2.5777	0.7528	2.4833	$0.8472
Pecos - Inc.	3.3305	2.5777	0.7528	2.4531	$0.8774
Thorntonville - Inc.	3.3305	2.5777	0.7528	2.4531	$0.8774
Pecos, Monahans, Barstow, Wink, Wickett, Thorntonville & Pyote - Env.	3.2880	2.5777	0.7103	2.4531	$0.8349
Andrews - Inc.	3.2336	2.5027	0.7309	2.4111	$0.8225
Andrews - Env.	3.1924	2.5027	0.6897	2.3818	$0.8106
Crane - Inc.	3.3305	2.5777	0.7528	2.4531	$0.8774
Crane - Env.	3.2880	2.5777	0.7103	2.4531	$0.8349
McCamey - Inc.	3.3305	2.5777	0.7528	2.4833	$0.8472
McCamey - Env.	3.2880	2.5777	0.7103	2.4531	$0.8349
North Texas					
Jacksboro, Bryson, Mineral Wells, Milsap, Graford, Aledo, Hudson Oaks, Willow Park and Possum Kingdom - Inc.	4.2055	2.8447	1.3608	3.0254	$1.1801
Jacksboro, Bryson, Mineral Wells, Milsap, Graford, Aledo, Hudson Oaks, Willow Park and Possum Kingdom - Env.	4.1319	2.8447	1.2872	2.9702	$1.1617
Breckenridge, Graham - Inc.	4.2774	2.8933	1.3841	3.0771	$1.2003
Breckenridge, Graham - Env.	4.2026	2.8933	1.3093	3.0210	$1.1816
Weatherford - Inc.	4.5134	3.1526	1.3608	3.3280	$1.1854
Weatherford - Env.	4.1319	2.8447	1.2872	2.9702	$1.1617
Panhandle					
Borger - Inc.	3.2564	2.4137	0.8427	1.9896	$1.2668
Borger - Env.	3.1619	2.4137	0.7482	1.9248	$1.2371
Skellytown - Inc.	3.2370	2.3993	0.8377	1.9777	$1.2593
Skellytown - Env.	3.1431	2.3993	0.7438	1.9134	$1.2297
Rio Grande Valley					
RGV - Inc.	3.5001	2.3031	1.1970	2.6791	$0.8210
RGV - Env.	3.3625	2.3031	1.0594	2.5922	$0.7703
Galveston					
Galveston - Inc.	3.9069	3.1632	0.7437	4.2772	($0.3703)
Bayou Vista & Jamaica Beach - Inc.	3.9069	3.1632	0.7437	4.2772	($0.3703)
Galveston & Bayou Vista - Env.	3.8174	3.1632	0.6542	4.2772	($0.4598)
Port Arthur					
Port Arthur, Nederland, Port Neches, Groves, Beaumont - Inc.	4.2143	3.4706	0.7437	3.4428	$0.7715
Port Arthur, Nederland, Port Neches & Groves - Env.	4.1248	3.4706	0.6542	3.4428	$0.6820
INDICES - Estimated At Beginning of Month					
Houston Ship Channel	3.0520	2.0610	0.9910	2.1790	$0.8730
Waha EPNG	1.8010	1.1440	0.6570	0.6520	$1.1490
Permian EPNG	1.9030	1.2760	0.6270	0.6850	$1.2180
San Juan EPNG	2.7730	1.8530	0.9200	1.6310	$1.1420
TX,OK,Kansas /NNG	3.0730	2.0580	1.0150	2.0090	$1.0640

Need Franchise Fee amounts for these cities:

Travis County
- Austin 5%

Cameron County
- Brownsville 5%
- Rio Grande Valley Not a city
- Harlingen 5%
- La Feria 2%
- Los Fresnos 2%
- Port Isabel 5%
- San Benito 5%

Dewitt County
- Cuero 2%

El Paso County
- Anthony 2.25%
- El Paso City 5%
- Fabens Not an incorporated city No Franchise Fee

Hidalgo County
- Alamo 5%
- Donna 5%
- Edcouch 3%
- Edinburg 5%
- Elsa 5%
- Hidalgo 5%
- La Joya 5%
- McAllen 5%
- Mercedes 5%
- Mission 4%
- North Alamo Not TGS
- Pharr 5%
- San Juan 5%
- Weslaco 5%

Caldwell County
- Luling 5%

Jefferson County
- Port Arthur 5%

Parker County
- * Weatherford .02846/ccf. (2016)

Willacy County
- Raymondville 4%

* Weatherford franchise fee is charged on volumetric basis. The rate is re-calculated each year base on previous year revenue and volume.

Residential

Rates & Fees

Water Rates (Updated 10/01/19)

WATER
RATES & FEES

Base Fee: $9.95

$1.45 per 1000 gal.
(0-7,999 gal.)

$1.75 per 1000 gal.
(8,000-12,999 gal.)

$1.95 per 1000 gal.
(13,000-17,999 gal.)

$2.05 per 1000 gal.
(18,000+ gal.)

SPRINKLER
RATES & FEES

Base Fee: $9.95

$1.95 per 1000 gal.
All Consumption

SEWER

RATES & FEES

Base Fee: $12.00

$1.70 per 1000 gal.
(0-19,999 gal.)

$2.20 per 1000 gal.
(20,000+ gal.)
All Consumption

RECLAIMED (REUSE)

RATES & FEES

Base Fee: $9.95

$1.16 per 1000 gal.
All Consumption

Sec. 90-76. - Single-family units.

(a) The monthly rate per bin for the collection and removal of garbage by the city from single-family residences shall be $14.50.

(b) If a lot has more than one residential unit including family housekeeping units located thereon, the basic rate set out in this section shall apply to each of such units.

(c) The rate established by this section shall apply to rooming houses as one unit, unless separate kitchen facilities are made available, in which case, the basic residential rate, as determined in this section shall be charged per kitchen facility.

(d) A base rate of $27.54 shall apply to residential customers whose premises are located outside the city's water certificate of convenience and necessity (CCN) service area.

(e) The city shall make available upon a residential customer's request or through assessment for misuse of recycling bin the use of a second bin for the collection of garbage or trash; the monthly rate for said use shall be $12.50.

(Code 1966, § 16-41; Ord. No. 1996-57, § X, 8-26-96; Ord. No. 1997-96, § IV, 10-13-97; Ord. No. 1998-91, § 1, 9-28-98; Ord. No. 2001-64, § 1, 9-24-01; Ord. No. 2005-43, § 1, 4-25-05; Ord. No. 2006-103, § 8, 10-9-06; Ord. No. 2008-41, § I, 5-27-08; Ord. No. 2016-44, § I, 7-11-16; Ord. No. 2016-65, § I, 10-10-16; Ord. No. 2018-83, § I, 11-26-18)

Sec. 90-88. - Brush collection rate.

(a) The monthly rate for the collection and removal of brush and bulky debris by the city from single-family residences shall be based on the front footage of the residential lot as follows:

(1) On lots with frontage up to 50 feet .....$ 3.24

(2) On lots with frontage 51 to 75 feet $4.86

(3) On lots with frontage 76 to 100 feet $6.49

(4) On lots with frontage 101 to 150 feet $8.11

(5) On lots with frontage 151 to 200 feet $10.70

(6) On lots with frontage over 200 feet $15.89

(b) The monthly rate for the collection and removal of brush and bulky debris by the city from commercial, industrial, multifamily (apartments, duplexes, triplexes, quads, condominiums, townhouses), mobile homes and/or travel trailer parks shall be $2.50 per month per unit.

(Ord. No. 2006-103, § 8, 10-9-06; Ord. No. 2008-41, § I, 5-27-08; Ord. No. 2012-14, § I, 2-27-12; Ord. No. 2016-44, § I, 7-11-16)

Sec. 90-89. - Recycling fee for residential units.

In addition to any other charges provided for in this chapter there shall be charged to every residential unit an amount equal to $2.00 for the purposes of funding the operation of the city's recycling services. Such charge shall be reviewed by the board of commissioners from time to time, in relationship to the cost of the city's mandatory recycling program and the revenues derived there from.

(Ord. No. 2008-41 § 1, 5-17-2008; Ord. No. 2008-41, § I, 5-27-08; Ord. No. 2012-14, § I, 2-27-12)

Utility Rate Gathering Form

Date: 11/12/2020

Housing Agency: Housing Authority of the City of McAllen, TX

Utility (highlight):					
	Electricity	Natural Gas	Water	Sewer	Trash
	Propane Bottle Gas	Fuel Oil			

Provider Name: McAllen Public Utility

Provider Phone No: 956-681-4000

Provider Contact Name: Martha

Provider Website: www.mcallen.net

RL Staff Gathering Data: Rane

Notes:

Description of Rate or Charge	Monthly Charge	Per Usage Rate	Usage Measure	% Charge (ex: tax)	Summer Months	Winter Months	Tiers/ Consumps
Sales Tax				8.25%			

DEVELOPMENT CHARACTERISTICS

Utility Provider Name*	Utility Type*	Phone Number	Website	Paid By*	
TBD	Electric			Resident	

Add Utility

Complete for Public Housing

(Complete only for developments with Resident-Paid and/or Check-Metered Utilities.)

Development Name*	Development Code*	Year Built	Building Type*	Total Units*	Bedroom Sizes (check all that apply)*						Resident-Paid Utilities*** (See Legend)					A/C?	
					0	1	2	3	4	5	Electric	Natural Gas	Water	Sewer	Trash		
Retama Village Ph. 1	TX0280000(	2008	Apartment/Walk-Up	128	☐	☑	☑	☑	☐	☐	N/A	N/A	N	N	N	N	

Add Development

Legend: I = Resident-Paid / Individual Meters, C = Check-Metered / Paid by Agency, M = Master-Metered / No Allowances

Utility Provider Name*	Utility Type*	Phone Number	Website	Paid By*	
TBD	Electric			Resident	

Add Utility

Complete for Section 8 Project-Based

Development Name*	Development Code*	Year Built	Building Type*	Total Units*	Bedroom Sizes (check all that apply)*						Resident-Paid Utilities*** (See Legend)					A/C?	
					0	1	2	3	4	5	Electric	Natural Gas	Water	Sewer	Trash		
Vine Terrace	TX0280000(	1982	Apartment/Walk-Up	49	☐	☑	☑	☑	☑	☐	N/A	N/A	N	N	N	N	

Add Development

Legend: I = Resident-Paid / Individual Meters, C = Check-Metered / Paid by Agency, M = Master-Metered / No Allowances

Utility Provider Name*	Utility Type*	Phone Number	Website	Paid By*	
TBD	Electric			Resident	

Add Utility

Management Company Name:* McAllen Housing Development Corporation

Property Type:* Section 8 Project-Based

New Construction/Existing?* Existing

Property Name:* Vine Terrace

Property Address:* 2250 N. 27th Street

City:* McAllen

State:* Texas

Zip Code:* 78501

Type of Study:* ~~HUD Utility Schedule Model (HUSM)~~ PBV (Site Specific)

Total # of Units*	Total # of Buildings*	Building Types Construction*	# of Stories for Building*	# of Stories for Unit*	Utility Allowances Needed* (check all that apply)
49	50	~~Apartment/Walk-Up~~ DH	All 1 story	1 story	☐ Electric Only ☑ Gas and Electric ☑ Including Water and Sewer ☑ Trash

# of each Bedroom Size*					# of Floor Plans for each Bedroom Size*					Square Footage for each Bedroom Size*				
1 BR	2 BR	3 BR	4 BR	5 BR	1 BR	2 BR	3 BR	4 BR	5 BR	1 BR	2 BR	3 BR	4 BR	5 BR
7	28	4	10	0	1	1	1	1	0	798	783	977	1238	0

Heating Equipment*	Air Conditioning*	Stove Fuel*	Water Heater Fuel*
Electric Resistance	Yes	Electric + Gas	Electric

Other Energy Improvements: (Please Specify) Reliant Energy Nest AC T-Stats, R-60 Attic Insulation, ECM Motors, LED lighting pl

Compliance Agency:* AEI consultants

Utility Provider Name:*

Add Utility Provider

CUSTOMIZATION FOR BASE REM/RATE MODELS

DEVELOPMENT REPORTS

ResidentLife Utility Allowances
A Service of the Nelrod Company

Home
Logout
Administration
Choose Agency
New Agency
Edit Agency
Users
Climate Regions
Utility Study
Developments
Utility Companies
Utility Rates
Calculate
Cost of Consumption
Average Costs
Proposed Allowances
Compare Allowances
Export
Utility Rates
Cost of Consumption
Average Costs
Total Consumptions
Proposed Allowances
Compared Allowances
Low-Rent Study
New
Open/Edit
Section 8 Study
New
Open/Edit

Current Study

Type: Low-Rent Utility Study - [New]
Date: November 19, 2020
Agency: Housing Authority of the City of McAllen, TX

ResidentLife Utility Allowance® Calculator

Developments / AMPs

INSTRUCTIONS
Use the Development Characteristics Chart and the Energy Customization Charts for reference.

- Click on tabs below in number order and answer questions. Don't **[SAVE]** until tabs 1 - 4 have been completed. **[SAVE]** will take you back to this screen.
- To **start** click on **[ADD DEVELOPMENT]** button below.
- After all development information has been input, click **[HOME]** and go to 2. Utility Companies.

Details

What is the development's name?	Vine Terrace
What is the development's extension number?	
What is the development's building type?	Detached House
	Click here for **HELP** with building type descriptions.
What type of residents occupy the development?	Family
Are water saving devices used?	NO
Do the units have air conditioning?	YES
How old is the development?	16 or more years

Utilities

What utility is used for space heating?	Electricity
What utility is used for domestic hot water?	Natural Gas
What utility is used for cooking stove?	Natural Gas
Do the Residents pay for natural gas?	YES
Do the Residents pay for electricity?	YES
Do the Residents pay for water or sewer?	YES
Do the Residents pay for trash pickup?	YES

Unit Details

	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR	6 BR
How many units?	0	1	1	1	1	0	0
Is there a pier beam foundation (Crawlspace)?	NO	NO	NO	NO	NO	NO	NO
Are there double-pane or Low-E windows?	NO	NO	NO	NO	NO	NO	NO
Is there an electric base board?	NO	NO	NO	NO	NO	NO	NO
Is there a heat pump?	NO	NO	NO	NO	NO	NO	NO
Is there a space heater in unconditioned space?	NO	NO	NO	NO	NO	NO	NO
Is there domestic hot water in unconditioned space?	NO	NO	NO	NO	NO	NO	NO
Are there ducts in the attic?	NO	NO	NO	NO	NO	NO	NO
Is this a 2-story unit?	NO	NO	NO	NO	NO	NO	NO

Energy Improvements (Natural Gas) - SHOW

Energy Improvements (Electric) - SHOW

Save Delete Reset

End-Use Consumptions

	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR	6 BR
Space Heating (kWh)		146	177	226	248		
Domestic Hot Water (Therms)		21	24	27	29		
Lights & Appliances (kWh)		168	209	256	300		
Cooking Stove (Therms)		5	7	7	8		
Water & Sewer (Gallons)		4013	5563	8663	10216		

End-Use Consumption Calculations - **SHOW**

Adjusted Consumption Totals

	0 BR	1 BR	2 BR	3 BR	4 BR	5 BR	6 BR
Electricity Winter (kWh)		350	429	537	609		
Electricity Summer (kWh)		168	209	256	300		
Natural Gas (Therms)		26	31	34	37		
Water (gallons)		4013	5563	8663	10216		

Consumption Total Adjustment Calculations - **SHOW**

Select a Development / AMP

Available Developments:

Vine Terrace TX-
Retama Village Phase I & II (All Electric) TX-(EE Equip: Win-V)

Add Development | Edit Development

Average Water Consumptions

Housing Authority of the City of McAllen, TX

Water Consumptions

Base Rate		Per	1000 Gallons
Rate		First	10000 Gallons
Rate		Next	10000 Gallons
Water Saving Devices Installed			**No**

Annual Usage Without Water Saving Devices

	Bedroom Sizes 1	2	3	4	
*USGS Annual Usage	36,500	73,000	109,500	146,000	
*CSG Network Usage	27,010	54,020	81,030	108,040	
*Southwest Florida Water Management District Usage	25,915	51,830	77,745	103,660	
*REUWS Usage	38,880	52,458	66,036	79,614	
Monthly Gallons	2,673	4,819	6,965	9,111	

*Source: Highlighted Cells are using an average of the USGS, CSG Network, Southwest Florida Water Management Calculators and Residential End Uses Water Study

HOUSING AUTHORITY OF THE CITY OF MCALLEN, TX

Standard Schedule

Resource: HUSM 13i November 30, 2020

Single-Family Detached House - Total Monthly Consumptions

Utility or Service	Units	0BR	1BR	2BR	3BR	4BR	5BR
Air Conditioning	kWh		151	340	529	718	

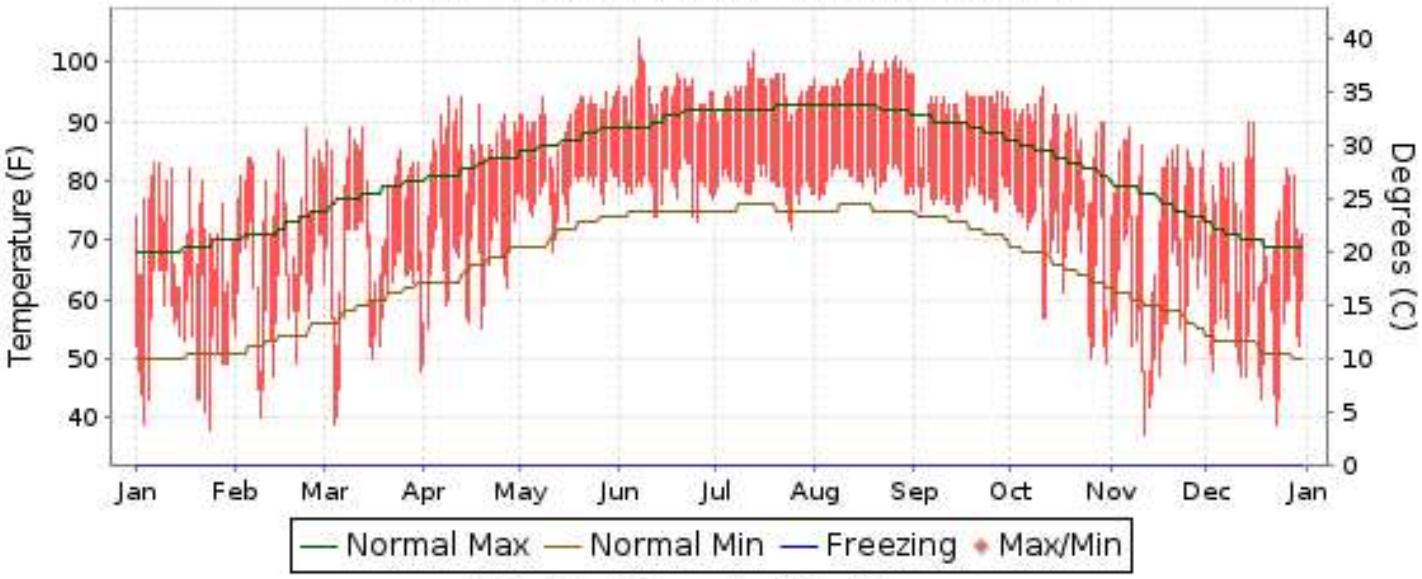
LOCAL CLIMATOLOGICAL DATA
ANNUAL CLIMATIC DATA SUMMARY

2019
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA

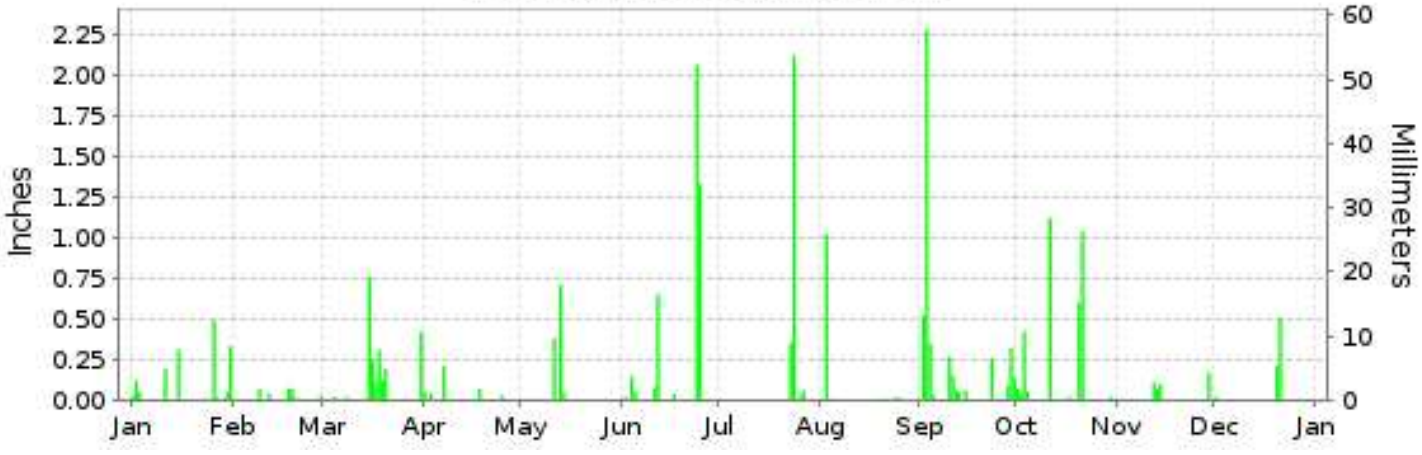
ISSN 0198-4942

BROWNSVILLE, TEXAS (KBRO)

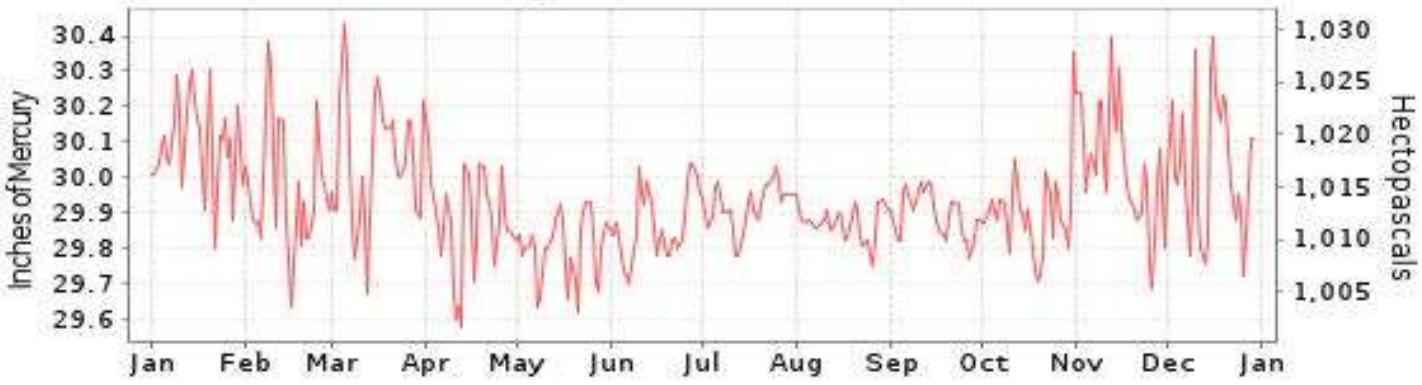
Daily Max/Min Temperature



Daily Precipitation



Daily Station Pressure



I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, AND IS COMPILED FROM RECORDS ON FILE AT THE NATIONAL CLIMATIC DATA CENTER.

NATIONAL | NATIONAL | NATIONAL CENTERS for

Mary A. Wohlgemuth

METEOROLOGICAL DATA FOR 2019
BROWNSVILLE (KBRO)

LATITUDE: 25° 54'N **LONGITUDE:** 97° 25'W **ELEVATION (FT):** GRND: 24 BARO: 24 **TIME ZONE:** CENTRAL (UTC -6) **WBAN:** 12919

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	MEAN DAILY MAXIMUM	72.1	75.9	76.8	85.9	90.5	95.4	95.5	98.2	92.9	87.1	77.6	75.7	85.3
	HIGHEST DAILY MAXIMUM	83	89	89	94	95	104	102	102	98	96	89	90	104
	DATE OF OCCURRENCE	08+	23	13+	13+	31+	07	13	15	01	11	07	16+	JUN 07
	MEAN DAILY MINIMUM	53.4	59.8	61.2	65.9	77.7	79.0	79.0	80.4	77.4	68.0	58.3	54.6	67.9
	LOWEST DAILY MINIMUM	38	40	39	49	68	73	72	77	75	49	37	39	37
	DATE OF OCCURRENCE	24	09	04	01	11	25	25	02	27+	31	12	23	NOV 12
	AVERAGE DRY BULB	62.8	67.9	69.0	75.9	84.1	87.2	87.2	89.3	85.1	77.5	68.0	65.2	76.6
	MEAN WET BULB	58.6	64.1	64.3	69.1	77.6	80.3	79.9	80.8	77.4		62.0		
	MEAN DEW POINT	55.4	62.1	62.0	65.7	75.9	78.2	77.4	78.1	74.6		58.3		
	NUMBER OF DAYS WITH:													
	MAXIMUM >= 90°	0	0	0	9	24	30	31	31	27	18	0	2	172
	MAXIMUM <= 32°	0	0	0	0	0	0	0	0	0	0	0	0	0
	MINIMUM <= 32°	0	0	0	0	0	0	0	0	0	0	0	0	0
	MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	0	0
H/C	HEATING DEGREE DAYS	121	62	83	12	0	0	0	0	0	13	74	80	445
	COOLING DEGREE DAYS	58	149	213	349	600	674	696	759	611	409	170	91	4779
RH	MEAN (PERCENT)	81	86	83	76	81	79	76	75	75	72	75	72	78
	HOUR 00 LST	89	92	90	88	90	91	89	88	84	78	84	80	87
	HOUR 06 LST	91	94	93	94	93	95	94	95	89	84	84	83	91
	HOUR 12 LST	66	77	72	56	66	61	58	52	60	57	61	56	62
	HOUR 18 LST	75	82	77	66	77	71	65	65	67	67	72	68	71
W/O	NUMBER OF DAYS WITH:													
	HEAVY FOG(VISBY <= 1/4 MI)	0	4	0	0	0	0	0	0	0	0	2	6	12
	THUNDERSTORMS	0	0	0	0	2	7	2	0	6	4	0	0	21
PR	MEAN STATION PRESS. (IN.)	30.09	29.96	30.06	29.88	29.80	29.86	29.92	29.87	29.90	29.90	30.03	30.04	29.94
	MEAN SEA-LEVEL PRESS. (IN.)	30.12	29.98	30.07	29.91	29.82	29.89	29.94	29.89	29.92	29.92	30.05	30.06	29.96
WINDS	RESULTANT SPEED (MPH)	1.4	2.5	4.5	7.4	10.9	8.8	9.6	9.9	5.6		1.3		
	RES. DIR. (TENS OF DEGS.)	08	12	12	14	13	14	15	14	12		14		
	MEAN SPEED (MPH)	9.7	10.3	11.8	12.4	13.9	11.2	11.2	10.8	8.5	9.4	10.0	8.9	10.7
	PREVAIL.DIR.(TENS OF DEGS.)	33	16	16	15	14	15	15	15	14	14	16	18	15
	MAXIMUM 2-MINUTE WIND													
	SPEED (MPH)	45	31	38	33	36	32	30	28	30	36	36	37	45
	DIR. (TENS OF DEGS.)	17	18	16	15	17	16	16	18	16	22	19	18	17
	DATE OF OCCURRENCE	22	14	13	30	21	22	28	26	10	21	26	15	JAN 22
	MAXIMUM 3-SECOND WIND:													
	SPEED (MPH)	55	41	51	44	41	39	45	38	38	47	45	51	55
	DIR. (TENS OF DEGS.)	17	03	16	33	17	15	14	13	16	32	19	17	17
	DATE OF OCCURRENCE	22	07	13	18	21	22	19	10	10	25	26	15	JAN 22
PRECIPITATION	WATER EQUIVALENT:	1.60	0.30	2.22	0.41	1.15	4.38	2.56	1.07	4.58	3.38	0.45	0.74	22.84
	TOTAL (IN.)	0.51	0.13	0.89	0.21	0.72	3.39	2.47	1.02	2.36	1.62	0.17	0.69	3.39
	GREATEST 24-HOUR (IN.)	26-27	18-19	15-16	07	13-14	24-25	23-24	03	03-04	20-21	29	20-21	JUN 24-25
	DATE OF OCCURRENCE													
	NUMBER OF DAYS WITH:	10	6	11	6	4	8	4	5	13	9	4	3	83
	PRECIPITATION 0.01	5	0	7	1	2	4	2	1	8	4	3	2	39
	PRECIPITATION 0.10	0	0	0	0	0	2	1	1	1	2	0	0	7
	PRECIPITATION 1.00													
SNOWFALL	SNOW,ICE PELLETS,HAIL													
	TOTAL (IN.)													
	GREATEST 24-HOUR (IN.)													
	DATE OF OCCURRENCE													
	MAXIMUM SNOW DEPTH (IN.)													
	DATE OF OCCURRENCE													
	NUMBER OF DAYS WITH:													
	SNOWFALL >= 1.0													

NORMALS, MEANS, AND EXTREMES
BROWNSVILLE (KBRO)

LATITUDE: 25° 54'N **LONGITUDE:** 97° 25'W **ELEVATION (FT):** GRND: 24 BARO: 24 **TIME ZONE:** CENTRAL (UTC -6) **WBAN:** 12919

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	70.6	73.7	78.9	83.7	88.4	92.1	93.6	94.4	90.5	85.7	79.1	71.8	83.5
	MEAN DAILY MAXIMUM	96	70.5	71.7	78.3	83.0	87.9	90.8	92.6	94.0	89.7	85.5	77.2	71.3	82.7
	HIGHEST DAILY MAXIMUM	81	95	94	106	104	102	104	104	105	105	97	97	94	106
	YEAR OF OCCURRENCE		2017	1986	1984	2017	1999	2019	2003	2012	2000	2012	1988	1977	MAR 1984
	MEAN OF EXTREME MAXS.	96	83.3	86.3	90.5	93.6	94.1	95.9	97.0	98.0	96.1	92.1	88.4	84.6	91.7
	NORMAL DAILY MINIMUM	30	51.6	54.7	59.6	65.9	72.3	75.7	76.3	76.2	73.1	66.9	59.6	52.7	65.4
	MEAN DAILY MINIMUM	95	51.2	53.0	59.5	65.4	71.3	74.3	75.5	75.8	72.4	66.4	58.3	52.3	64.6
	LOWEST DAILY MINIMUM	81	19	22	32	38	51	60	68	63	55	35	31	16	16
	YEAR OF OCCURRENCE		1962	1951	1989	1980	2013	1975	1989	1967	1995	1993	1993	1989	DEC 1989
	MEAN OF EXTREME MINS.	96	34.2	37.7	42.0	50.9	60.7	68.7	72.1	71.7	64.4	52.3	41.8	35.8	52.7
	NORMAL DRY BULB	30	61.1	64.2	69.3	74.8	80.3	83.9	84.9	85.3	81.8	76.3	69.4	62.2	74.5
	MEAN DRY BULB	95	60.9	62.3	68.9	74.2	79.6	82.6	84.1	84.9	81.1	75.9	67.8	61.8	73.7
	MEAN WET BULB	36	55.0	58.6	62.3	67.4	72.7	75.8	76.4	76.3	74.5	69.1	62.6	57.1	67.3
	MEAN DEW POINT	36	54.5	57.8	61.4	66.9	72.3	75.3	75.5	75.8	73.9	68.4	61.9	56.3	66.7
	NORMAL NO. DAYS WITH:														
	MAXIMUM >= 90	30	0.0	0.2	1.0	3.4	11.8	24.4	28.0	28.6	19.3	6.0	0.4	0.0	123.1
	MAXIMUM <= 32	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MINIMUM <= 32	30	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.0
	MINIMUM <= 0	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H/C	NORMAL HEATING DEG. DAYS	30	180	104	43	8	0	0	0	0	0	4	50	165	554
	NORMAL COOLING DEG. DAYS	30	59	82	174	302	476	567	618	629	504	354	180	80	4025
RH	NORMAL (PERCENT)		80	79	76	76	78	76	73	75	77	77	78	79	77
	HOUR 00 LST	30	88	87	86	87	88	87	87	87	88	88	87	86	87
	HOUR 06 LST	30	89	89	88	89	91	91	92	92	91	91	89	88	90
	HOUR 12 LST	30	66	63	59	60	61	59	55	56	60	60	62	66	61
	HOUR 18 LST	30	74	70	68	68	71	67	63	64	69	71	74	76	70
S	PERCENT POSSIBLE SUNSHINE	55	41	48	53	56	63	72	79	76	68	65	51	41	59
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	56	6.1	4.1	3.4	1.9	0.9	0.1	0.1	0.3	0.3	0.8	3.3	4.8	26.1
	THUNDERSTORMS	72	0.4	0.7	0.8	2.0	3.3	3.1	2.7	4.2	4.8	2.0	0.8	0.4	25.2
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)							3.2							
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH:														
	CLEAR	1	4.0	4.0	4.0		7.0	12.0	3.0	6.0	7.0	6.0		5.0	
	PARTLY CLOUDY	1	2.0	2.0	4.0		12.0	7.0	1.0	4.0	4.0	2.0		2.0	
	CLOUDY	1	3.0	3.0	9.0			1.0		2.0	2.0	2.0		7.0	
PR	MEAN STATION PRESSURE(IN)	36	30.09	30.03	29.97	29.90	29.87	29.88	29.94	29.92	29.90	29.96	30.03	30.07	29.96
	MEAN SEA-LEVEL PRES. (IN)	36	30.11	30.05	29.99	29.91	29.89	29.90	29.96	29.94	29.92	29.98	30.05	30.09	29.98
WINDS	MEAN SPEED (MPH)	36	10.0	11.3	11.9	12.4	12.3	10.9	10.8	9.4	7.9	8.6	9.4	9.7	10.4
	PREVAIL.DIR(TENS OF DEGS)	44	17	16	15	16	15	15	15	15	15	15	16	34	15
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	25	45	41	43	41	43	38	51	43	51	37	36	40	51
	DIR. (TENS OF DEGS)		17	16	17	13	32	05	26	18	30	16	19	15	26
	YEAR OF OCCURRENCE		2019	2008	2008	2006	2005	2010	2008	2014	1996	2015	2019	2006	JUL 2008
	MAXIMUM 3-SECOND														
	SPEED (MPH)	25	55	51	52	54	56	48	68	54	69	60	47	51	69
	DIR. (TENS OF DEGS)		17	16	18	11	32	04	26	30	12	17	33	17	12
	YEAR OF OCCURRENCE		2019	2008	2008	2016	2005	2010	2008	1999	2010	2002	2006	2019	SEP 2010
PRECIPITATION	NORMAL (IN)	30	1.27	1.08	1.23	1.54	2.64	2.57	2.04	2.44	5.92	3.74	1.82	1.15	27.44
	MAXIMUM MONTHLY (IN)	80	5.11	10.25	5.94	10.35	9.72	13.06	13.24	9.56	20.18	17.12	7.69	9.45	20.18
	YEAR OF OCCURRENCE		1945	1958	1997	1991	2015	1942	2008	1975	1984	1958	1986	1940	SEP 1984
	MINIMUM MONTHLY (IN)	80	T	T	T	T	T	0.01	T	0.02	0.07	0.00	0.01	T	0.00
	YEAR OF OCCURRENCE		1956	2016	1986	2009	1978	1955	1993	1974	1959	2010	1949	1969	OCT 2010
	MAXIMUM IN 24 HOURS (IN)	80	3.00	4.98	5.38	9.37	4.56	8.18	6.68	5.48	12.19	6.67	4.08	5.69	12.19
	YEAR OF OCCURRENCE		1988	1958	2007	1991	1969	1942	2008	1980	1967	1996	1986	1940	SEP 1967
	NORMAL NO. DAYS WITH:														
	PRECIPITATION >= 0.01	30	7.3	5.5	4.4	4.0	4.9	5.9	5.3	6.6	10.0	7.5	6.0	7.0	74.4
	PRECIPITATION >= 1.00	30	0.3	0.2	0.3	0.3	1.0	0.6	0.6	0.7	1.7	1.0	0.5	0.2	7.4
SNOWFALL	NORMAL (IN)	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	MAXIMUM MONTHLY (IN)	63	T	T	T	0.0	0.0	0.0	0.0	T	0.0	0.0	T	T	T
	YEAR OF OCCURRENCE		1993	1973	1993					1992			1991	1966	MAR 1993
	MAXIMUM IN 24 HOURS (IN)	63	T	T	T	0.0	0.0	0.0	0.0	T	0.0	0.0	T	T	T
	YEAR OF OCCURRENCE'		1993	1973	1993					1992			1991	1966	MAR 1993
	MAXIMUM SNOW DEPTH (IN)	44	T	T	0	0	0	0	0	0	0	0	0	T	T
	YEAR OF OCCURRENCE		1985	1963										1983	JAN 1985
	NORMAL NO. DAYS WITH:														
	SNOWFALL >= 1.0	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PRECIPITATION (inches) 2019 BROWNSVILLE (KBRO)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1990	0.58	0.56	0.81	1.55	2.72	1.08	1.53	2.87	3.90	2.29	0.91	0.05	18.85
1991	0.47	2.50	0.02	10.35	2.97	1.93	2.36	0.89	5.57	3.33	0.15	1.18	31.72
1992	3.50	1.99	0.12	4.15	5.55	1.50	0.40	3.71	3.62	0.85	5.61	0.85	31.85
1993	1.79	2.86	1.68	0.34	3.64	6.72	T	0.04	1.93	4.69	1.25	2.29	27.23
1994	2.01	0.44	1.84	0.71	1.25	3.32	0.15	3.39	4.09	3.91	1.42	1.59	24.12
1995	0.64	0.57	0.64	0.13	0.17	5.82	0.07	8.25	2.12	8.82	1.83	0.98	30.04
1996	0.06	0.15	T	0.50	0.08	0.01	0.65	5.77	8.57	11.49	0.66	0.77	28.71
1997	0.61	0.42	5.94	4.78	2.06	1.47	T	1.80	4.77	13.03	0.87	0.46	36.21
1998	0.37	1.72	0.62	0.04	T	0.30	T	1.36	7.82	3.59	3.72	0.29	19.83
1999	0.26	1.49	3.01	0.14	3.59	2.30	1.86	2.61	3.99	0.69	2.77	0.32	23.03
2000	0.85	0.19	2.89	0.39	1.87	0.85	0.28	4.29	0.66	2.71	0.41	1.10	16.49
2001	0.48	1.43	0.36	1.10	0.49	2.21	1.81	1.80	3.25	0.36	2.42	1.02	16.73
2002	0.09	0.98	0.22	0.64	1.96	1.88	0.84	1.87	6.04	8.31	4.22	1.24	28.29
2003	0.69	0.55	0.56	0.41	0.19	3.24	2.58	2.74	15.13	6.90	0.44	0.31	33.74
2004	1.84	0.79	3.63	2.85	5.37	3.19	0.38	2.35	4.05	1.98	1.82	1.46	29.71
2005	0.57	0.78	0.24	0.03	1.17	0.06	3.32	0.77	2.70	1.43	1.84	1.50	14.41
2006	0.68	0.14	0.42	0.05	3.46	0.24	1.90	2.89	3.67	5.02	1.16	2.04	21.67
2007	1.84	0.90	5.50	0.56	1.91	5.23	4.73	3.16	5.32	1.02	0.77	0.11	31.05
2008	1.34	0.04	0.28	3.35	0.61	0.62	13.24	2.61	9.57	3.26	2.98	0.47	38.37
2009	0.11	0.47	0.11	T	4.52	0.49	0.24	0.60	9.43	3.12	1.46	5.64	26.19
2010	0.61	4.08	0.90	1.53	2.99	7.62	5.14	0.92	12.63	0.00	0.13	0.01	36.56
2011	2.42	0.06	0.07	0.00	0.08	8.88	0.71	0.22	2.14	1.25	0.55	1.55	17.93
2012	0.34	4.24	0.51	0.26	1.14	3.85	2.17	3.85	3.76	0.80	0.16	0.32	21.40
2013	1.47	0.01	0.28	3.10	0.74	0.85	2.13	1.47	11.88	1.63	1.93	3.52	29.01
2014	0.68	0.07	1.46	0.28	2.83	0.64	1.64	1.91	10.36	3.82	3.46	1.43	28.58
2015	3.56	0.76	4.74	1.73	9.72	0.76	2.36	3.03	3.84	13.68	2.54	0.16	46.88
2016	1.88	T	2.67	3.26	2.18	2.98	0.18	0.51	1.98	1.08	4.42	1.67	22.81
2017	0.18	1.36	1.84	0.63	1.85	3.49	2.31	1.38	4.64	3.25	0.79	1.15	22.87
2018	0.76	1.47	0.49	1.90	0.68	5.21	0.48	0.48	7.71	1.31	1.90	0.65	23.04
2019	1.60	0.30	2.22	0.41	1.15	4.38	2.56	1.07	4.58	3.38	0.45	0.74	22.84
POR= 96 YRS	1.28	1.23	1.02	1.53	2.29	2.85	1.85	2.35	5.20	3.33	1.63	1.21	25.77

WBAN : 12919

AVERAGE TEMPERATURE (°F) 2019 BROWNSVILLE (KBRO)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1990	65.1	67.0	70.2	75.5	81.0	85.4	84.5	85.4	81.3	74.9	70.8	61.8	75.2
1991	58.5	64.5	73.4	78.0	81.6	84.7	84.0	86.0	79.6	77.1	64.6	64.3	74.7
1992	58.0	65.5	70.3	72.8	76.8	84.1	85.4	84.3	82.0	76.4	66.4	64.7	73.9
1993	61.2	65.7	68.6	73.4	77.7	82.3	84.7	85.6	82.9	75.0	65.8	63.8	73.9
1994	62.6	63.6	68.1	74.1	79.9	84.1	85.7	83.1	79.7	76.3	73.9	65.7	74.7
1995	61.3	67.3	66.9	74.3	82.4	83.0	84.9	83.5	82.0	75.2	68.0	63.2	74.3
1996	60.8	63.7	65.2	72.1	82.7	84.7	86.3	84.7	81.6	76.0	69.5	64.1	74.3
1997	58.2	64.2	70.0	70.8	77.2	82.4	85.5	85.6	82.2	74.2	65.7	59.7	73.0
1998	65.3	64.5	67.9	72.1	81.5	87.3	87.1	86.5	82.9	76.8	72.2	62.0	75.5
1999	64.7	69.0	71.0	77.5	81.3	83.9	83.8	85.5	80.3	74.4	69.1	62.2	75.2
2000	66.1	70.4	74.4	75.7	82.5	84.3	85.7	84.0	82.7	74.8	68.6	57.2	75.5
2001	59.6	67.5	66.9	78.0	80.6	85.7	85.7	86.5	81.8	76.3	70.4	64.4	75.3
2002	63.8	59.7	69.5	79.1	81.6	84.5	84.7	86.4	82.6	78.3	66.2	63.0	75.0
2003	58.8	61.6	68.5	75.0	83.2	84.1	84.1	84.6	80.9	75.7	71.2	62.0	74.1
2004	62.7	62.2	72.4	74.7	79.3	84.4	86.3	86.3	81.9	80.4	71.8	62.4	75.4
2005	66.7	66.3	69.5	74.2	79.6	85.2	86.0	86.8	84.8	77.3	70.6	62.5	75.8
2006	65.1	64.4	74.0	79.8	81.8	83.2	85.0	86.4	82.4	76.8	70.7	62.3	76.0
2007	57.0	64.0	71.6	71.9	78.9	83.1	84.5	85.2	82.4	76.9	70.4	66.0	74.3
2008	61.4	68.9	70.2	75.6	80.5	85.1	82.6	85.2	80.0	74.6	69.1	63.4	74.7
2009	63.7	69.2	69.5	75.6	81.3	84.2	87.0	86.2	82.1	77.8	68.3	57.6	75.2
2010	60.6	59.1	66.2	75.3	82.4	85.6	84.9	87.1	82.7	76.7	70.0	65.1	74.6
2011	62.2	62.7	73.1	80.5	82.7	85.3	85.0	87.3	84.2	76.1	70.3	62.9	76.0
2012	66.4	66.2	72.6	79.1	82.8	86.2	85.5	86.6	83.4	78.3	72.4	67.5	77.3
2013	61.5	68.7	69.3	73.4	79.6	85.5	85.2	85.9	82.7	78.6	66.9	60.3	74.8
2014	57.9	62.4	65.9	74.8	77.2	84.6	84.8	86.6	82.4	78.9	64.7	65.9	73.8
2015	55.7	61.1	66.6	77.1	81.2	84.0	84.6	84.9	81.9	78.1	73.6	67.2	74.7
2016	58.9	65.2	72.2	75.5	80.3	83.6	87.2	86.8	85.3	80.2	73.3	67.6	76.3
2017	66.3	73.3	74.2	78.6	82.2	85.1	84.1	86.7	82.5	76.6	73.9	62.5	77.2
2018	58.5	70.8	74.7	74.9	83.2	87.0	87.5	87.8	84.9	77.0	65.7	64.0	76.3
2019	62.8	67.9	69.0	75.9	84.1	87.2	87.2	89.3	85.1	77.5	68.0	65.2	76.6
POR= 95 YRS	60.9	62.3	68.9	74.2	79.6	82.6	84.1	84.9	81.1	75.9	67.8	61.8	73.7

HEATING DEGREE DAYS (base 65°F) 2019 BROWNSVILLE (KBRO)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1990-91	0	0	0	3	26	194	217	69	5	0	0	0	514
1991-92	0	0	1	0	121	134	223	63	26	10	0	0	578
1992-93	0	0	0	0	82	93	152	58	48	1	0	0	434
1993-94	0	0	0	36	110	134	130	115	44	7	2	0	578
1994-95	0	0	0	1	4	89	173	43	90	4	0	0	404
1995-96	0	0	0	0	44	175	177	158	122	23	0	0	699
1996-97	0	0	0	1	44	135	287	90	19	28	0	0	604
1997-98	0	0	0	6	83	196	75	53	56	3	0	0	472
1998-99	0	0	0	0	7	193	111	43	9	3	0	0	366
1999-00	0	0	0	13	31	133	96	27	1	2	0	0	303
2000-01	0	0	0	54	66	262	199	77	38	0	0	0	696
2001-02	0	0	0	0	46	116	143	179	56	0	0	0	540
2002-03	0	0	0	0	63	119	206	153	28	9	0	0	578
2003-04	0	0	0	8	44	142	142	129	1	6	0	0	472
2004-05	0	0	0	0	14	156	76	80	19	2	0	0	347
2005-06	0	0	0	0	28	141	86	105	23	0	0	0	383
2006-07	0	0	0	0	20	144	278	99	33	44	0	0	618
2007-08	0	0	0	0	57	86	170	37	33	0	0	0	383
2008-09	0	0	0	2	40	143	112	36	62	7	0	0	402
2009-10	0	0	0	0	19	252	180	173	48	0	0	0	672
2010-11	0	0	0	0	31	99	126	200	11	0	0	0	467
2011-12	0	0	0	1	38	143	67	81	22	0	0	0	352
2012-13	0	0	0	2	1	77	176	37	24	11	1	0	329
2013-14	0	0	0	0	108	217	233	166	90	10	0	0	824
2014-15	0	0	0	0	113	72	291	147	67	0	0	0	690
2015-16	0	0	0	0	22	60	205	73	13	1	0	0	374
2016-17	0	0	0	0	8	90	92	9	2	0	0	0	201
2017-18	0	0	0	7	9	176	236	54	0	3	0	0	485
2018-19	0	0	0	17	116	101	121	62	83	12	0	0	512
2019-	0	0	0	13	74	80							

WBAN : 12919

COOLING DEGREE DAYS (base 65°F) 2019 BROWNSVILLE (KBRO)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1990	105	107	194	324	503	619	612	641	494	318	209	100	4226
1991	23	62	273	395	522	599	599	657	446	383	117	120	4196
1992	13	81	198	249	375	579	640	603	518	361	129	89	3835
1993	44	82	166	260	401	522	620	647	543	349	142	103	3879
1994	61	80	149	289	471	581	646	568	446	360	278	114	4043
1995	66	115	158	292	549	551	626	582	519	324	143	128	4053
1996	54	129	134	240	553	596	668	621	507	349	187	110	4148
1997	84	74	178	209	388	530	647	643	523	297	111	40	3724
1998	88	44	151	223	518	673	692	674	545	372	229	107	4316
1999	110	159	200	383	513	573	588	642	465	312	159	58	4162
2000	137	189	300	330	549	585	649	597	535	363	179	27	4440
2001	38	153	106	399	487	630	644	675	511	356	216	103	4318
2002	115	35	203	429	518	590	618	672	537	420	109	64	4310
2003	21	65	143	317	572	582	597	612	485	347	236	55	4032
2004	75	56	236	300	451	588	668	667	513	486	225	82	4347
2005	138	122	166	284	460	614	657	682	600	390	203	69	4385
2006	95	94	308	453	525	553	626	626	529	370	196	69	4444
2007	37	79	244	260	438	548	609	636	531	376	227	127	4112
2008	65	153	204	326	488	606	554	635	457	305	168	98	4059
2009	79	161	208	332	514	582	687	664	517	400	124	30	4298
2010	51	12	91	315	545	628	625	695	538	372	187	107	4166
2011	45	145	267	472	555	614	627	696	586	349	205	85	4646
2012	117	123	265	432	558	642	640	676	559	421	227	161	4821
2013	74	147	166	272	463	623	632	656	537	430	173	77	4250
2014	21	99	123	311	388	597	624	677	528	441	111	109	4029
2015	13	44	124	373	508	573	617	624	515	414	282	134	4221
2016	21	87	243	325	484	565	697	683	616	481	265	176	4643
2017	141	246	294	416	540	613	598	679	532	374	284	107	4824
2018	43	222	307	306	570	669	709	715	604	396	145	79	4765
2019	58	149	213	349	600	674	696	759	611	409	170	91	4779

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SNOWFALL (inches) 2019 BROWNSVILLE (KBRO)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1980-81	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981-82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1982-83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983-84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984-85	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1985-86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986-87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987-88	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988-89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989-90	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1990-91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-92	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T
1992-93	0.0	T	0.0	0.0	0.0	0.0	T	0.0	T	0.0	0.0	0.0	T
1993-94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994-95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995-96	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		
1996-97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997-98	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
1998-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1999-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002-03	0.0	0.0	0.0	0.0	0.0	0.0							
2003-04													
2004-05													
2005-06													
2006-07													
2007-08													
2008-09													
2009-10													
POR= 79 YRS	0.0	T	0.0	0.0	T	T	T	0.0	T	0.0	0.0	0.0	T

WBAN : 12919

REFERENCE NOTES :

PAGE 1:
THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).
PAGE 2 AND 3:
H/C INDICATES HEATING AND COOLING DEGREE DAYS.
RH INDICATES RELATIVE HUMIDITY
W/O INDICATES WEATHER AND OBSTRUCTIONS
S INDICATES SUNSHINE.
PR INDICATES PRESSURE.
CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).
GENERAL:
T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE.
+ INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES.
BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA.
ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM.
PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH.
POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING.
WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED.
0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05.
CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET
CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS.
GENERAL CONTINUED:
WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH.
RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION.
AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2.
SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL.
A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65 F.
DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR.
DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY.
WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.
ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.
STATION HISTORY STOPPED WITH THE 2009 ANNUAL. IF YOU NEED SATION HISTORY INFORMATION GO TO "Historical Observing Metadata Repository", URL IS:
http://www.ncdc.noaa.gov/homr/
SNOWFALL STOPPED MONTH & YEAR INDICATED ABOVE. NO FURTHER YEARS INCLUDED UNLESS RESTARTED.

NOTE:

The "Period of Record:(POR)" for all "averages" is based on "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.

2019
BROWNSVILLE
TEXAS (KBRO)

Brownsville is located at the southern tip of Texas. It is the largest city in the four county area referred to as the Lower Rio Grande Valley or just the Valley.

The Gulf of Mexico, located about 18 miles east, is the dominant influence on local weather. Prevailing southeast breezes off the Gulf provide a humid but generally mild climate. Winds are frequently strong and gusty in the spring.

Brownsville weather is generally favorable for outdoor activities and the Valley is a popular tourist area, especially for Winter Texans who come to enjoy the mild winters. High temperatures range mostly in the 70s and 80s from October through April, with lows in the 50s and 60s during the same period. For the remainder of the year highs are frequently in the 90s with lows in the 70s.

Temperature extremes are rare but do occur. Temperatures in the 90s have occurred in every month of the year, with 100 degree readings noted as early as March and as late as September. Temperatures of 100 degrees or more are associated with west winds bringing hot dry air out of Mexico. Very hot temperatures are often moderated by a cooling sea breeze from the Gulf during the afternoon hours.

Located about 150 miles north of the tropics, cold weather in Brownsville is infrequent and of short duration. Some winters pass without a single day with freezing temperatures. This climate permits year around gardening and cultivation of citrus and other cold sensitive tropical and sub-tropical plants. Damaging cold comes from frigid air masses, called northers or arctic outbreaks, plunging south from Canada or the Arctic. The worst of these can drop temperatures well below freezing for several hours, and a few have produced readings in the teens. Fortunately such events are very rare since they are disasterous to the local economy.

Rainfall is not well distributed. Heaviest rains occur in May through June and mid August through mid October. Extended periods of cool rainy weather, called overrunning, can occur in winter. Torrential rains of 10 to 20 inches or more may accompany tropical storms or hurricanes that occasionally move over the area in summer or fall. Rainy spells may be followed by long dry periods. Irrigation is required to ensure production of corps such as cotton, grains, and vegetables. Snow and freezing rain or drizzle are so rare that years may pass between occurrences.

Brownsville is blessed by having little severe weather. Damaging hail or winds from heavy thunderstorms are generally limited to the Spring season and many years may elapse between occurrences. Tornadoes are even more rare. Tropical storms and hurricanes from the Gulf are a threat each summer and fall, but again, damaging storms are quite rare.

Station History

BROWNSVILLE, TX

NAME	Begin Date	End Date	Latitude	Longitude	Elevation Feet	Relocation	Platform
BROWNSVILLE RIO GRANDE VALLEY INTL AP	1969-01-01	1972-01-01	25° 55'	-97° 28'	33		COOP,UPPERAIR,WXSVC
BROWNSVILLE RIO GRANDE VALLEY INTL AP	1972-01-01	1981-12-31	25° 55'	-97° 28'	19		COOP,UPPERAIR,WXSVC
RIO GRANDE VALLEY AP	1928-10-01	1930-08-02	25° 55'	-97° 28'			AIRWAYS
BROWNSVILLE RIO GRANDE VALLEY INTL AP	1940-08-01	1946-08-01	25° 55'	-97° 28'			AIRWAYS,UPPERAIR
BROWNSVILLE RIO GRANDE VALLEY INTL AP	1946-08-01	1969-01-01	25° 55'	-97° 28'	33		AIRWAYS,COOP,UPPERAIR
BROWNSVILLE S PADRE ISLAND INTL AP	2003-12-29	2017-10-01	25° 54'	-97° 25'	24		AIRWAYS,ASOS,COOP,UPPERAIR
BROWNSVILLE MUNICIPAL AP	1930-08-02	1938-11-16	25° 55'	-97° 28'			AIRWAYS
BROWNSVILLE RIO GRANDE VALLEY INTL AP	1938-11-16	1940-08-01	25° 55'	-97° 28'			AIRWAYS
BROWNSVILLE S PADRE ISLAND INTL AP	1994-05-01	1995-03-01	25° 54'	-97° 25'	24	.5 MI W	ASOS,COOP,UPPERAIR
BROWNSVILLE S PADRE ISLAND INTL AP	1995-03-01	2003-12-29	25° 54'	-97° 25'	24		ASOS,COOP,UPPERAIR
BROWNSVILLE S PADRE ISLAND INTL AP	2017-10-01	Present	25° 54'	-97° 25'	24		AIRWAYS,ASOS,COOP,PLCD,UPPERAIR
BROWNSVILLE RIO GRANDE VALLEY INTL AP	1981-12-31	1994-05-01	25° 55'	-97° 28'	19		COOP,UPPERAIR
BROWNSVILLE/INT.	1929-01-01	2015-12-31	25° 55'	-97° 25'	23.3		UPPERAIR,BALLOON

Element History

Element	Begin Date	End Date	Frequency	Time Of Observation	Equipment *	Equipment * Modifications	Equipment Exposure
PRECIP	1988-04-26	1994-05-01	HOURLY	2400	UNIV	RCRD	
TEMP	1994-05-01	2007-04-06	DAILY	2400	HYGR		
PRECIP	1928-10-01	1963-09-01	DAILY	2400	UNIV	RCRD	
TEMP	1963-09-01	1988-04-26	DAILY	2400			
TEMP	1988-04-26	1994-05-01	DAILY	2400	HYGR		
PRECIP	2007-04-06	Present	DAILY	2400	TB	RCRD	
TEMP	2007-04-06	Present	DAILY	2400	HYGR		
PRECIP	2007-04-06	Present	HOURLY	2400	TB	RCRD	
TEMP	1928-10-01	1963-09-01	DAILY	2400			
WIND	2007-04-06	Present	HOURLY	UNKN	ANEMSONIC		
PRECIP	1963-09-01	1988-04-26	HOURLY	2400	UNIV	RCRD	
PRECIP	1963-09-01	1988-04-26	DAILY	2400	UNIV	RCRD	
PRECIP	1994-05-01	2007-04-06	DAILY	2400	TB	RCRD	
PRECIP	1988-04-26	1994-05-01	DAILY	2400	UNIV	RCRD	
WIND	1994-05-01	2007-04-06	HOURLY	UNKN	ANEMCUP		
PRECIP	1994-05-01	2007-04-06	HOURLY	2400	TB	RCRD	

***** For explanation of codes and abbrevitions see Station Metadata link below.

Other Station Information can be found at:
ASOS Implementation by NWS: http://www.nws.noaa.gov/ops2/Surface/asosimplementation.htm
Station Metadata website: http://www.ncdc.noaa.gov/homr

INQUIRES/COMMENTS CALL: (828) 271-4800, option 2
Fax Number : (828) 271-4876
TDD : (828) 271-4010
Email : ncdc.orders@noaa.gov

NOAA/National Centers for Environmental Information
Attn: User Engagement & Services Branch
151 Patton Avenue
Asheville, NC 28801-5001

INTRODUCTION TO REM/RATE SOFTWARE PROGRAM

INTRODUCTION TO REM/RATE™ SOFTWARE PROGRAM

1. REM/Rate™ Software Design Objective

REM/Rate – Residential Energy Analysis and Rating Software Program is a sophisticated, residential energy analysis, code compliance and rating software program. REM/Rate calculates heating, cooling, hot water, lighting, and appliance energy loads, consumption and costs for new and existing single and multi-family homes.

REM/Rate operates in Windows and has many unique features, including a simplified input procedure, extensive component libraries, automated energy efficient improvement analysis, duct conduction and leakage analysis, latent and sensible cooling analysis, lighting and appliance audit, and active and passive solar analysis.

A home energy rating is calculated based on the proposed Department of Energy (DOE) Home Energy Rating System (HERS) guidelines (10 CFR 437) as modified by the RESNET/NASEO (Residential Energy Service Network/National Association of State Energy Officials) HERS Technical Committee. REM/Rate also creates value added information including energy appraisal addendum, energy code compliance (Model Energy Code (MEC) and American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)), improvement analysis (existing homes), design optimization (new homes), heating and cooling equipment sizing and U.S. Environmental Protection Agency (EPA) Energy Star Home analysis.

2. Use of REM/Rate in Utility Allowance Development

REM/Rate utilizes an Engineering approach to calculate the consumption allowance for various types of new and existing homes. The REM/Rate software program is recognized and approved by EPA, DOE and HUD.

The Nelrod Company is accredited and licensed by HERS/RESNET and a certified and licensed REM/Rate provider and user. We have successfully conducted energy home rating and energy audits using this software for over 31,550 reports. The information from our past experience and these reports is used to develop models for the most common building types and bedroom sizes, which in turn are utilized in developing average monthly utility allowances.

3. Basic Procedures

The data needed for this program is collected either from the building/site plans provided and/or from a site visit. Building type models are developed for the most common building types (Single-Family Detached House, Semi-Detached/Duplex, Row/Townhouse, Multi-Family Walk-Up, and Manufactured Homes) and bedroom sizes. The program calculates heating, cooling, hot water, lighting and appliances

energy load, consumption and cost based on home's design and construction features as well as climate and energy cost data.

The calculations are conducted following the Residential Energy Services Network (RESNET) Home Energy Rating System (HERS) technical guidelines, developed in cooperation with, US DOE, US Department of Veterans Affairs (USVA), HUD, and the National Association of State Energy Officials (NASEO) as the rating system used to determine energy usage in new and existing construction. The guidelines were established as the only national standard for determining energy savings based on construction types and local (community-wide) geographical locations. It estimates the annual energy quantity a home will require and the cost of that energy based on local utility rates. The guidelines make assumptions about the size and lifestyle of the family who will occupy the home. These assumptions are based on nationally accepted standards developed by the US DOE, American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) and US EPA. Such assumptions include occupancy rates of 2 persons for the first bedroom and one additional person for each additional bedroom; thermostat setting of 68° Fahrenheit for heating and 78° Fahrenheit for cooling, which is the recommended setting for an energy conserving household. To determine water heater energy usage, tap water temperatures are adjusted for local geographical locations and 120° thermostat settings are used, which is considered energy conservative. In addition, architectural components are considered such as square footages, number of stories, insulation R-values, wall materials, mechanical equipment types and efficiencies.

The REM/Rate software utilizes default standards based on national trends. (See details following this introduction.) If there are no local surveys available regarding residential lifestyles, a residential rental market study can be conducted to gather data on the most common household amenities, such as, dishwashers, clothes washers and dryers, microwaves, and size of refrigerators.

Additionally, the Agency can provide architectural characteristics concerning common foundation types, exterior siding, and other structure features for their area. This information will be used to further adjust the building type models.

4. Input Values and Determination

REM/Rate provides two levels of inputs: simplified and detailed. Simplified inputs use general design characteristics and built–in algorithms to determine the results. We use detailed inputs which provide the user greater control over calculational values and development of common building type models.

The various input parameters are as follows:

- Location – List of US and Canadian locations;
- Energy costs – create or modify various utility rates based on the existing market;
- Building Component data – Foundation type, Opaque wall constructional details, window/skylights conduction and solar gain values, type of ceilings and doors, heating equipment, cooling equipment, water heating equipment, various types of lights and appliances used.

These values are determined either from verified conditions/site visits or from the building plans. A Certified IECC (International Energy Conservation Code) Inspector/HERS/RESNET (Home Energy Rating Systems/Residential Energy Services Network) Rater inputs characteristics from building plans and/or from documentation gathered from an on-site inspection of the physical, structural and mechanical details. We use the criteria from our past experience to develop models for common building types and bedroom sizes.

Climate data is available for cities and towns throughout North America. This data is updated periodically with new versions of the REM/Rate software program.

Extensive utility libraries can be created and maintained for specific utility provider rates and charges and are available to apply to consumption data to determine local utility allowances.

5. Output Values, Interpretation and Use for Utility Allowances

Fifty-six preformatted reports are available for viewing on screen or printing. Reports include energy use, energy cost, design loads, rating, quick report, improvement analysis, code compliance, and economic analysis of energy upgrades.

Reports are generated from the building type models in the REM/Rate software program and analyzed for consumption usage totals by energy end-use categories. (Fuel Summary and Lights & Appliance Summary.)

REM/RATE SOFTWARE DEFAULT AUDIT

Lighting and Appliance Algorithms

REM/Rate Software uses the energy consumption of basic home appliances for the Default Loads. The appliances for the **Default Loads** are:

Lighting (permanent and non-permanent)
Plug Loads
Refrigerator/Freezer
Clothes Washer
Clothes Dryer
Oven/Range

The consumption in MMBtu is dependent on what the days of the heating and cooling seasons are.

Number of Occupants based on HUD's occupancy standards, and HUD's Keating Memo.

Lighting (Watt h / Day) = $[HR_c + (Area/HR_{area}) + (HR_{occ} \times Occupants)] \times Watts / Fixture$

Where:

HR_c	constant number of fixture (or bulb) hours
HR_{area}	number of square feet per fixture (or bulb) hours
HR_{occ}	number of fixture (or bulb) hours per occupant
Area	conditioned area
Occupants	number of occupants in the structure

Permanently Installed Lighting:

	Heating Season	Cooling Season
HR_c	8	7
HR_{area}	500	800
HR_{occ}	2	1
Watts/Fixture Incandescent	100	100
Watts/Fixture Fluorescent	30	30

Non-Permanently Installed Lighting:

	Heating Season	Cooling Season
HR_c	14	10
HR_{area}	350	600
HR_{occ}	2.5	1
Watts/Fixture Incandescent	70	70
Watts/Fixture Fluorescent	25	25

Appliance Load

Lighting: The lighting usage is described in terms of fixture-hours and bulb-hours, (e.g. three fixture hours would be present if one fixture is on for 3 hours, or 3 fixtures are on for one hour). The lighting usage can then be determined by multiplying the number of lamp hours by the wattage per lamp, which would be determined by the percentage of fluorescent lamps.

Three terms exist in the determination of the number of fixture hours: a constant, a ratio by area, and a ratio by number of occupants (e.g. bedrooms). HR_c fixture hours/day are assumed as a base load. Added to this is one fixture hour/day for every HR_{area} square foot of conditioned area, and HR_{occ} fixture hours/day for each occupant (four non-permanently installed lights, substitute bulb hours in place of fixture hours.)

100 watts/fixture is assumed for the average permanently installed incandescent fixture, and 30 watts/fixture for the average permanently installed fluorescent fixture. The actual wattage assumed is ratioed by the percentage of fluorescent fixtures. If no information is input, a ratio of 10% fluorescent fixtures is assumed.

70 watts/bulb is assumed for the average non-permanently installed incandescent bulb, and 25 watts/bulb for the average non-permanently installed fluorescent bulb. Again, the actual wattage is dependent upon the percentage of fluorescent bulbs, and a value of 10% is used if no information is input on non-permanently installed lighting.

Refrigerator: Vary refrigerators' consumption by year, type and size, based on the data provided by VEIC. The load due to year shall be interpolated, and the load due to size shall stay in the batch mode, (e.g. the program will pick which data to use by type and size, and then interpolate the data for the year).

Range/Oven:

Electric: 1.5 kwh/day (550 kwh/yr)
Gas: 12,000 Btu/day (4.4 MMBtu/yr)

Clothes Washer:
30 kwh/yr/person

Clothes Dryer:
Electric: 300 kwh/yr/person = 2 people for 1st bedroom + 1 for each additional = 3.5 persons x 25 kwh = 87.50 kwh
Gas 1.5 MMBtu/yr/person + 35 kwh (Electric)/yr/person
Plug Loads: 1.25 kwh/day + 1.75 kwh/day/person

Detailed Audit

REM/Rate also allows the user to enter the details of the Lights and Appliances by choosing the Perform Detailed Audit ratio button. By selecting this option, the user can enter the exact internal loads of the residential building.

The following table describes a detailed audit performed on the REM example building:

Name	Type	Location	Qty	Fuel	Use	Efficiency
Ceiling Fan	Miscellaneous	Conditioned Area	1	Electricity	220.0 kwh/ Year	Standard
Dishwasher	Dishwasher	Conditioned Area	1	Electricity	290.0 kwh/ Year	Standard
Clothes Dryer	Clothes Dryer	Conditioned Area	1	Electricity	880.0 kwh/ Year	Standard
Lights	Light Fixture(s)	Conditioned Area	1	Electricity	940.0 kwh/ Year	Standard
Microwave	Microwave	Conditioned Area	1	Electricity	190.0 kwh/ Year	Standard
Plug Loads	Plug Load(s)	Conditioned Area	1	Electricity	500.0 kwh/ Year	Standard
Range/Oven	Range/Oven	Conditioned Area	1	Electricity	450.0 kwh/ Year	Standard
Refrigerator	Refrigerator	Conditioned Area	1	Electricity	1150.0 kwh/ Year	Standard
Television	Miscellaneous	Conditioned Area	1	Electricity	720.0 kwh/ Year	Standard
Washer	Clothes Washer	Conditioned Area	1	Electricity	100.0 kwh/ Year	Standard
Washer	Clothes Washer	Conditioned Area	1	Water	5.0 gallons/ Week	Standard
Shower	Shower/Bath	Conditioned Area	1	Water	10.0 gallons/ Day	Standard

Internal Gains in (Rating) Load:

The internal gains will include all of the heat from the refrigerator, the oven/range, the clothes washer, and the plug loads. Heat from the dryer is assumed to be vented out of the conditioned space.

Domestic Hot Water (DHW)

The assumption currently used for DHW is 30 gallons + 10 gallons/occupant, and will not be changed with the presence or absence of dish or clothes washers. Reasons for this include: the 30 gallons + 10 gallons/occupant average includes the averaged use of dishwashers and clothes washers. People will use some water to wash dishes if they do not have a dishwasher, but it is not clear whether the amount of water they use could approach the amount used by a dishwasher. A clothes washer is assumed to exist, as 75 percent of all households contain a clothes washer. Therefore, no adjustment is needed.

REM/Rate Internal Gains Data

Daily internal gains (Btu/day) are assumed to be:

	Heating	**Cooling**
Lighting	2,100/occ	1,200/occ
Appliance	3,000/occ + 15,000	3,000/occ + 15,000
Occupant	4,800/occ	4,800/occ
Total (Btu/day)	9,900/occ + 15,000	9,900/occ + 15,000
(Btu/hr)	413/occ + 625	375/occ + 625

If the DHW type is Heat Pump, the internal gains are further adjusted:

	Heating	**Cooling**
Heat Pump DHW	7,000/occ	8,000/occ

The number of occupants is assumed to be equal to the number of bedrooms in the home.

The REM method assumes that the gains are constant over the day and thus half occur during the daytime, coincident with the solar gains, and half at night when no solar gains are present. The internal gains during these two time periods are treated separately when the heating and cooling loads are calculated.