



## **FAIR USE WATER POLICY 2020**

**As developers and owners, we are undoubtedly all in agreement that effective water management is integral to water security; a critical component to the success and longevity of Big Sky Ranch and our neighbor communities in the Escomequita Basin.**

**Previously, the land we now call Big Sky Ranch was operated as a cattle farm for many generations. Uncontrolled deforestation to create pasture land for grazing cattle reduced the capacity for the aquifer to recharge. It is generally agreed that the aquifer in this region is strong with good capacity and we would like to keep it that way.**

**Our coastal area is considered dry-tropical forest, characterized by distinct wet and dry seasons (unimodal precipitation pattern) and brown landscapes (leaf-off) for five months of the year January through May.**

**As in many countries in the World, there is a general lack of hydrological knowledge that affects both access and quality of the water. Moving forward, we would like to play a role in our own education as well as of the local community and lead by example how to best manage this precious resource.**

**With your help, we will create landscaping options better suited for our dry tropical region, and we encourage all lot owners to find effective ways to collect rain water and repurpose water at your home for irrigation and non consumption water use.**

**In recognition of the demand on the aquifer, we will monitor usage by individual households, educate our crew on water conservation, and implement tiered water pricing for Big Sky Ranch. This document outlines our water usage and billing policy at this time. Costs for delivery of water will be reviewed as required and may affect billing.**

**We are all responsible for water use at Big Sky Ranch. Only when we understand this and all assume that responsibility can we rest assured we will have water for our future enjoyment.**



## 1. Big Sky Ranch Usage Policy & Billing Policy

Big Sky Ranch Homeowners Association [the Association] will provide monthly billing for the delivery of water to your lot based on the consumption of water used.

In Nicaragua, water is measured in cubic meters which equals 264.2 gallons.

The Association reserves the right to change the policy and regulations it considers necessary or desirable.

Residential water usage is defined as the sum of indoor and outdoor uses. Indoor uses include water for drinking, food preparation, washing clothes, showering, washing dishes and flushing toilets. Water usage for outdoors includes topping up pools, washing cars and watering gardens and water features. Our water policy provides allowances for a reasonable amount of water, based on both indoor and outdoor use.

Any amount, if any, collected in excess of the cost to deliver water will be used for ongoing maintenance costs of the system or upgrades as required.

## 2. Water Usage Allowances

### Indoor Allowance

To determine allowances has been no easy task. Allowances for water will be based on both indoor [plumbing system] and outdoor [irrigation, water features and pools]. According to the [studies in the US](#) the average water use per person per day is approximately 60 gallons/.23m<sup>3</sup> per day for indoor use. Other organizations have published values that vary somewhat and Big Sky Ranch has taken an average of numbers from viable sources and is allowing 60 gallons/ .23m<sup>3</sup> per person per day plus a set amount per lot for outdoor use.



### Outdoor Allowance

For outdoor water allowance we referred to research conducted by an established neighboring community Rancho Santana, that used the [Landscape Coefficient Method](#), which was developed by the University of California to determine outdoor water allowances. The method requires a series of calculations which take into account the evapotranspiration rate for a specific climate (evapotranspiration is the sum of the evaporation and plant transpiration from the earth's surface into the atmosphere), the drought tolerance of plant species, the planting density and the microclimate. Using a series of calculations it can be determined how much water a landscape needs in order to remain healthy. To calculate how much water should be allocated towards the landscaping in our area, they completed this calculation using a coefficient for the evapotranspiration rate for the Rivas area, an average planting density, a high microclimate coefficient and a drought tolerant plant species coefficient. In this case all home lots are allocated the same area for landscaping equal to an amount of 8,000 gallons/30.28 m<sup>3</sup> per month.

### Pool

An additional component of the water allowance is a one-time per annum allowance for pools. If a pool needs to be emptied and refilled for maintenance or other purposes, property owners can request a one-time allowance for this purpose. This allowance will be based on the actual volume of water required for each pool and the specific reasons for the request. It is important that unless an emergency, the refilling is scheduled outside of the dry season. There is a set fee of **\$300** for this service.

### New Construction

During construction, there will also be water requirements during your build. Most homes are constructed with concrete which takes a considerable amount of water. During construction, your cost would be the initial tap fee with meter and a price per m<sup>3</sup> until the home is finished.



### 3. Usage and Fee Structures

The Fee Structure for water delivery service has three components: a Hook Up Fee, a Base Charge, and a Volume/Usage Charge

#### Hook Up

The developer is responsible for delivering water to your property line. When you are ready to use the water, there is a one time minimum hook fee of **\$280** to access the water pipe and install a water meter to monitor your water use.

#### Base Fee

After hook up installation, owners at Big Sky Ranch will be charged and assessed a monthly Base Fee. See table next page below for reference.

#### Usage Fee

Modeling the precedent of water policy and rate structures used within the State of California and in neighboring developments here in Nicaragua, we have developed allocation-based usage rates to be used throughout Big Sky Ranch. Allocation based rates include higher per gallon/m<sup>3</sup> cost for usage exceeding base usage amounts established according to the number of bedrooms in your residence(s).

1. Billing is to be based on metered water use. Meters are read and recorded weekly. The spreadsheet will be provided to you upon request.
2. The base use allocation established for each owner provides a reasonable amount of water for the customer's needs
3. A conservation charge is only imposed on water use that exceeds the basic use allocation. The volumetric prices for the lowest through highest priced increments are structured to encourage conservation.



# BIG SKY RANCH

## N I C A R A G U A

### 4. Tier Pricing

Taking into account the number of bedrooms in each home, and applying the allocation methodology described above, we created the following tiers for water consumption.

Tier 1, also known as the Monthly Allowance, is the reasonable allocation of water determined for each residence. All water under the limit of the Monthly Allowance is provided at a set rate per month.

Tier 2 rates are for water over the Monthly Allowance and up to 2x the Monthly Allowance.

Tier 3 rates are for all water in excess of 2x the Monthly Allowance.

#### **Big Sky Ranch Water Allowance Calculation and Pricing**

Monthly Water Allowance Calculation Table for Big Sky Ranch

60		Allowance of Gallons per person per month			Tier 1		Tier 2	Tier 3
1 m3		264.2 gallons					\$1.62/m3	\$3.10/m3
	Indoor		Outdoor	Base Allowance per Month	Base Rate per Month	>base allowance < 2x base	> Tier 2	
# Bedrooms	m3/month	gallons	m3/month	m3/month		m3/month	m3/month	
1	13.8	3,650	30.3	44.1	\$28.00	88.2	> Tier 2	
2	27.6	7,301	30.3	57.9	\$36.50	115.8	> Tier 2	
3	41.5	10,951	30.3	71.7	\$45.00	143.5	> Tier 2	
4-5	55.3	14,602	30.3	85.6	\$54.00	171.1	> Tier 2	
6-8	69.1	18,252	30.3	99.4	\$63.00	198.7	> Tier 2	

Tier 1 Base Rate includes all water use up to your monthly allowance.

Tier 2 Rate \$1.62

Tier 3 Rate \$3.10

Construction Rate: One time \$280 hook up fee and a flat rate of \$2.25 per cubic meter

The escalating pricing in Tier 2 and Tier 3 is designed to help prevent abuse of water use (and thus costs to you) by promoting conservation methods such as irrigation, drought resistant plants, strategic use of soil, rainwater collection, gray water reuse and other water preserving techniques.



## 5. Billing

You will be billed monthly by the Big Sky Ranch HOA and payment is due within 15 days of invoice date.

- Late payment charges are added if bills are not paid on time; the charge is \$3 or 1% of the outstanding bill, whichever is more.
- Unpaid bills and deposits may result in service being discontinued. Additional fees are applied to restore service
- If bill is not paid, the HOA has the right to disconnect the delivery of water to your property on the 91st day from invoice date.

Conservation and communication are the key to water security and our future at Big Sky Ranch. Please report leaks or issues with the system as soon as possible and share your ideas on how to better conserve water and improve the services at Big Sky Ranch.

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