Water Sources on Athas

By Xocatchil

In Athas's scorching desert, every drop of water is precious. Yet, some places still bear traces of a bygone era, when the world was wetter and more vibrant. Today's aquifers—often buried deep underground—date back to these forgotten periods. During those more favorable and humid ages, vast amounts of groundwater slowly infiltrated permeable layers and were preserved beneath thick sediments.

In the Tyr region, several such aquifers persist and continue to be replenished in part by the regular rainfall received by the Ringing Mountains and the Forest Ridge in the form of light rains and seasonal snow. This water seeps into the soil, follows the incline of permeable strata, and reemerges much further down, in the foothills and lower parts of the Tyr Region.

Natural Springs

1. Focal Resurgences

These are the simplest forms of springs. At a specific location—often at the base of a rock formation or in a shallow depression—water emerges at the surface. This occurs when a small, shallow aquifer finds a natural outlet, such as a fissure or a porous patch of soil.

These resurgences typically have a low flow rate and may dry up seasonally. They are sometimes enough to fill a small pond, supply a watering trough, or maintain a simple well. Some are connected to ancient karst systems (limestone formations with natural tunnels).

- ☛ Can support a community ranging from a few dozen to a few hundred people, depending on flow.

2. Hillside Springs

In gently sloped regions, water sometimes naturally flows out from hillsides or cliffs. This occurs when a permeable soil layer sits atop an impermeable one (like clay or hard rock). Water collects above this barrier and exits where terrain allows.

These springs are more reliable than focal resurgences. They can feed a small stream or be

channeled to irrigate terraced crops. They're often located at the edge of plateaus or foothills and may be connected to underground galleries for gravity-fed distribution.

- ☛ Simple hillside springs: villages or hamlets of up to 200–500 people.
- ☛ Multiple outcropping zones (springs, shallow aquifers, runoff): permanent agricultural oases, supporting 500–2,000 people.
- ☛ Integrated hydraulic systems (capture + storage + distribution): full-fledged cities or urban centers, 5,000–20,000 inhabitants or more—like the city-state of Tyr.

3. Artesian Springs

Some underground water tables are trapped between two layers of impermeable rock. This creates high pressure that can push the water up to the surface when it finds a crack. These are called artesian springs, and they don't flow because of gravity, but because of the pressure inside the aquifer. As long as there is enough water stored, the pressure stays high and the spring flows steadily. But if too much water is drawn out or the aquifer isn't refilled fast enough, the pressure drops — and the spring may start flowing irregularly or stop altogether.

- ☛ Their flow rate varies and may support anything from small villages to entire towns.

4. Karstic Resurgences

In some limestone regions, water has carved complex underground networks through the rock. Rainfall at high elevations (e.g., in the Ringing Mountains) feeds these systems, and water may reemerge far from where it entered. These springs can vary greatly in abundance, but some are very plentiful. They often appear at the base of mountains or near cave-ridden regions.

- ☛ In some cases, they can sustain entire villages or permanent agricultural networks.

5. Depression Springs

In areas with natural topographic basins, infiltrated water from afar may collect by gravity. These springs are common around the edges of salt desert basins.

- ☛ Some major oases stem from such sources and may support several hundred to thousands of people.

6. Geysers and Hot Springs

Very rare, typically from deep origins. Sometimes toxic or too hot for direct use.

- ☛ Their use requires treatment (cooling, sedimentation).

Wells

1. Deep Wells

Wherever water tables exist, wells can be dug to reach them. These aquifers are not under pressure, so water must be drawn manually or mechanically—using buckets, ropes, counterweights, etc.

Such aquifers are often found beneath wadis (dry riverbeds) or near elevated terrain where rainwater collects. These wells may be shallow or exceed 50 meters in depth, depending on local geology. Easy to dig but require regular maintenance. Their yield is limited but vital.

- ☛ The method used to draw water determines how many people the well can sustain.

2. Artesian Wells

These wells are drilled down to a pressurized aquifer, similar to those that feed artesian springs (which occur naturally, unlike these artificially made wells). Unlike typical deep wells, the natural pressure can be sufficient for the water to rise to the surface on its own, without the need for pumping. The water can flow continuously, day and night, as long as the aquifer remains pressurized.

They share the same limitations as artesian springs — if the aquifer is not replenished by new water infiltration, it will eventually run dry, permanently.

- ☛ Can support entire villages or small towns if well-managed.

Oases

General Definition

An oasis as defined in this document is any location in a desert where water is sufficiently available and stable to support permanent human settlement and the associated agricultural zone. Their form depends on terrain, subsurface structure, aquifer presence, and the technical capacity and organization of the inhabitants.

In foothill, depression, erg, wadi, or karstic oases, the natural spring flow can often be enhanced through underground engineering. Skilled or well-organized communities build gently sloped drainage tunnels (also known as qanats or foggaras) connected to the aquifer, sometimes stretching for hundreds of meters. These galleries include vertical shafts at regular intervals, which serve for ventilation, maintenance, and excavation. By intercepting water over a broader area, minimizing evaporation, and channeling it toward a main collector located at a lower elevation, this system significantly increases water availability. It also helps stabilize the flow and allows for the expansion of irrigated agricultural zones.

1. Foothill Oases

Located at the base of mountain chains—mainly the Ringing Mountains—these oases capture infiltration, runoff, or shallow aquifers recharged by precipitation on the peaks. They often have fertile alluvial soils and multiple capture points (springs, wells, drainage tunnels). Surrounding savannahs often enable extensive herding.

- ☛ Population supported: 500–5,000 people. Up to 10,000 with multiple well-maintained water sources. The city-state of Tyr benefits from this type of oasis

2. Depression Oases

Set in natural topographic basins, these oases use gravity-fed flow from deep aquifers or accumulated water from ancient wadis. Depressions are often cooler and sheltered from wind but prone to salt buildup (especially in salt flats). Highly saline oases require selective crops and frequent cleaning of irrigation channels.

- ☛ Population supported: 500–3,000 people. Up to 5,000 if deep water is clean and well-managed.

3. Erg (Dune) Oases

Buried within sandy regions, these oases tap aquifers trapped between impermeable or moist layers beneath dunes. Their stability relies on ancient rainfall and internal condensation. Access is difficult, and evaporation is high.

- ☛ Population supported: 50–300 people. Rarely more without mechanical water lifting.

4. Wadi Oases

Situated along ancient riverbeds (fossil wadis), they draw from alluvial groundwater and may receive rare, violent flash floods. Many feature terraced agriculture. These oases are often long and narrow, following the wadi's course.

- ☛ Population supported: 200–2,000 people. More if supplemented by tunnels or additional aquifers.

5. Karstic Oases

These form around limestone resurgences, often at cave mouths or natural underground networks. When conditions align (strong recharge zone, deep network, permeable geology), they may offer steady, high flows despite some variability.

- ☛ 50–500 people if flow is irregular or low
- ☛ Up to 1,000–3,000 people if fed by a large, reliable karst network

6. Captive Oases

Exist solely due to wells drilled into aquifers, often deep underground. These wells require significant technical effort and are often maintained using enslaved labor (humanoids or beasts). Water is drawn via counterweights, bucket chains, or piston pumps, if the skills and materials are available.

- ☛ Without mechanization: 20–100 people (manual lifting is slow and tiring)
- ☛ With slave or animal labor: 100–500 people
- ☛ With mechanical pump systems: up to 1,000 or even 2,000 people if the aquifer is ample

7. Condensation Oases

Small oases built around systems that harvest atmospheric moisture: ventilated galleries, cool walls, underground cisterns. These passive technologies extract only a few liters per day and are often used for medicinal gardens, hidden sanctuaries, or druidic hermitages.

- ☛ Population supported: 5–50 people max, depending on local conditions

8. Flood Oases

Temporarily formed by water accumulation in natural basins after rare rains or flash floods. They vanish within weeks unless stabilized. May be reinforced by sand barriers, masonry basins, or ancient dikes.

These oases are more commonly found in the foothills of the Ringing Mountains, where rainfall is more frequent — though most often sudden and violent.

- ☛ Population supported: temporary (50–300 people), mostly during the rainy season (if any). Can recharge other aquifers.

9. Supernatural Oases

Some oases are maintained by supernatural sources. Their waters never dry up or regenerate mysteriously, but they are extremely rare and highly coveted.

- ☛ Population supported: varies based on the source's size and stability. Potentially very high if water is pure and steady—enough for a small city.

Examples of Special Oases

Rhasal (Condensation Oasis)

Description

The village of Rhasal stands amid rocky heathlands, built atop the ruins of an ancient city. The current inhabitants have reused the remains of the former settlement to construct their homes and defenses. Remnants of the past are visible throughout the village: weathered stone walls form the foundations of houses, and fragments of columns and arches support the newer buildings. At the heart of Rhasal, several massive conical stone towers rise proudly, showcasing the craftsmanship of the ancients who once inhabited this place.

A palm grove and a fig orchard, with barley fields at their base, stretch just outside the village.

Main Structures

Air Wells

The monumental conical towers of Rhasal, made of stone and clay, reach nearly 25 meters in height. Large, sail-like protrusions spiral around each tower. These intriguing structures—designed and built by the ancients—condense moisture from the night air, collecting water that feeds two large underground cisterns and irrigates the village's palm and fig groves, where barley is grown for local sustenance.

Of the original eight air wells, only five remain functional; the others have been repurposed or dismantled for other uses.

Council Tower

Once an air well, this imposing tower has been converted into a central building housing a large meeting hall and the council chamber that governs the village. Its height has been reduced to about fifteen meters, with a flat roof now topping the structure.

Defenses

The village is surrounded by a sturdy wall built from stones taken from the old ruins, protecting its inhabitants from external threats. A former air well in disrepair has been repurposed into a watchtower, reinforced and fitted with ballista firing positions to keep a constant watch over the surrounding land.

Key Figures

Matriarch Selma – Head of Rhasal's council, Selma is a wise and respected leader. A former warrior, she now uses her experience to guide and protect her people.

Engineer Joram – In charge of maintaining and optimizing the air wells, Joram is a dwarf and a gifted engineer. He has devoted his life to studying the ancient techniques and understanding their function, as have his predecessors. Half of Rhasal's population consists of dwarves who, like Joram, have focused their efforts on the upkeep and study of the air wells.

Captain Rael – Commander of Rhasal's guard, Rael is a skilled tactician and formidable warrior. He leads the village's defense and ensures that every resident is prepared to defend their home if necessary.

Ghorun (Supernatural Oasis)

Description

The village of Ghorun lies at the heart of an exceptional microclimate within Athas's arid desert. Its existence is owed to a rare phenomenon: an Elemental Nexus, a maelstrom of raw energy where the four elements converge. This Nexus produces

intense heat and constant vapor, which give rise to light clouds and regular rainfall over the immediate region. Around the Nexus, massive rock formations rise like natural walls, dampening both the destructive effects of elemental chaos and the harsh desert conditions.

It is on the side of one such rock wall that the homes of Ghorun have been carved directly into the stone, offering lasting shelter from wind, sandstorms, and extreme climatic shifts.

The Ghorunians—including a significant number of Janns, genies tied to all four elements—cultivate fertile terraces around the village, enriched by mineral deposits from the Nexus. These crops thrive in the humid air and provide fruit, grains, and herbs with both nutritional and medicinal properties. Small groves and clearings, blessed by the Nexus's influence, support modest goat and sheep herding, granting the village a degree of self-sufficiency.

Main Structures

Agricultural Terraces

Crops are spread across terraced fields surrounding the village, following the contours of the nearby rock formations. The Nexus-enriched soil yields remarkable harvests in this isolated area. Simple channels carved into the stone direct rainwater to farming zones and cisterns, while dry-stone shelters protect seedlings from sand-laden winds.

Sanctuary of the Nexus

Located near the elemental maelstrom is the sanctuary, the spiritual heart of Ghorun. It is a vast semi-natural amphitheater carved into a rocky cavity where the flows of the Nexus are visible to the naked eye. Rituals, ceremonies, and elemental meditations are held here, led by the village's Janns.

Visitor Lodges

Due to its uniqueness, Ghorun attracts scholars, pilgrims, initiates, and adventurers. A series of modest but welcoming lodges has been built to host them. Guests must adhere to a strict code of conduct established by the Janns—or face banishment, or worse, be cast to the elements.

Defenses

Ghorun's first line of defense lies in its natural walls: the cliffs and rocky spurs that encircle the Nexus. Beyond this barrier, security relies heavily on the presence and powers of the Janns. These genies, deeply bonded with the Nexus, can manipulate air, earth, water, or fire to raise walls of flame, summon gales, or harden the ground against intruders.

Key Figures

Na'Zahir – A prominent figure among the Janns, Na'Zahir ensures balance within the Nexus. He presides over the most significant ceremonies and serves as mediator between the Ghorunians and the elemental forces.

Thela – Originally from a distant city-state, Thela is a determined human woman responsible for agricultural coordination and crop distribution. She oversees the maintenance of the terraces and manages water resources efficiently.

Rakum – A former nomad who settled in Ghorun, Rakum knows the surrounding lands better than anyone. He leads the village's scouts, who patrol the area and monitor for potential threats.

Halagran (Mechanized Wells)

Geography and Environment

Halagran is situated atop an isolated hill, providing a strategic location with panoramic views and natural defensive advantages. The hill rises from stony barrens fringed by wide savannas where

herds graze among thorny shrubs, tall grasses, and scattered cacti.

The soil and rock formations in the region are primarily composed of sandstone, giving the earth a reddish hue and a sandy texture. Black dust, a byproduct of coal mining activities, stains parts of the rock and soil, adding a somber aspect to the already austere landscape. Spoil heaps and mining headframes are prominent features around the city, testifying to the importance of mining in the area. These structures dominate the horizon; some headframes remain active, while others are decommissioned and have been integrated into the urban fabric.

Description of the City-State

The city-state of Halagran is encircled by formidable sandstone walls. Upon entering the city, visitors are met with its constant bustle. Laborious slaves, their faces blackened by soot and coal dust, tirelessly extract coal from the city's mines. While most mining headframes and spoil heaps are located around the city, some decommissioned headframes still stand within the city itself. The shallow coal seams have been entirely depleted, and extraction now occurs exclusively at greater depths.

In the past, mining the deeper coal seams beneath the city posed challenges due to an aquifer that flooded the lower mine levels. Ingenious dwarves developed treadle piston pumps that not only allowed deeper coal extraction but also enabled the pumping of this drainage water to the surface. Although the coal deposit beneath the city is now exhausted, the treadle piston pumps are still operated by half-giant slaves and meticulously maintained by dwarves whose focus is their upkeep, channeling the precious water to the city's summit. Consequently, the dwarves of Halagran enjoy considerable respect within the city for their essential work.

The heart of the city is marked by the palace of Sylas, the sorcerer-king, surrounded by lush gardens and the residential district of the Templars. A canal runs through the Templars' quarter, irrigating both the private gardens of high-ranking Templars and the royal gardens.

Beyond the city's summit, the urban area comprises markets, dwellings, and a zone of agricultural terraces covering one side of the hill. Arches are an omnipresent architectural element in Halagran. In common homes, they often frame windows and doors. The residences of nobles and Templars elevate this aesthetic with peristyles of arches surrounding their inner courtyards, resembling open cloisters. The city also features several large arches framing its access gates and supporting bridges and canals, adding to its majesty. Sandstone is a frequently used construction material, imparting a distinctive hue to the city's structures, as does the coal dust that blackens many buildings. The homes of nobles and Templars, as well as the merchant quarter and main city buildings, are regularly cleaned of soot, unlike most of the rest of the city.

Palace of Sylas

At the core of Halagran, elevated above the rest of the city, lies the Templars' quarter and the palace of Sylas. This district is enclosed by an imposing wall, serving both as a defense against potential insurrections and as a symbol of power.

Within this enclosure, the Templars' quarter unfolds in a series of winding streets, with a central canal supplying water throughout the district. This main canal branches into several smaller ones that meander through the quarter, irrigating the lush gardens of the most eminent Templars and their majestic residences. These homes are sandstone constructions adorned with sculptures and mosaics.

At the center of the Templars' quarter stands Sylas's palace, nestled within verdant gardens. These gardens are a green oasis of beauty and tranquility amidst the sandstone and coal city. Canals traverse these gardens, feeding numerous pools and waterfalls that offer Sylas a peaceful

retreat away from the tensions and intrigues of the court.

The palace itself is an architectural masterpiece of carved and sculpted sandstone. It is a vast complex of towers, ballrooms, private chambers, and council halls. Its central tower, the tallest structure in Halagran, offers an unobstructed view of the entire city-state and the lands beyond its walls.

Coliseum

At the heart of Halagran stands the imposing structure of the Coliseum. Its grand sandstone architecture draws attention and never fails to awe those who approach it.

The arena, elliptical in shape, measures 80 meters along its major axis and 30 meters along its minor axis. The center of the arena is open, covered with black earth, forming the combat ground for gladiators.

The arena's main feature is the set of large sandstone arches that span above it. These arches intersect at the ellipse's secondary axis, creating an impressive structure that crosses the space above the arena. Large colored sails are stretched between these arches, providing welcome shade to spectators and combatants.

The audience is seated in tiered stands surrounding the arena. This design allows a large number of spectators to watch the combats while offering them an unobstructed view of the action. The stands are always packed, the crowd's roar mingling with the gladiators' war cries.

Finally, the sorcerer-king Sylas and his Templars have luxurious private boxes, offering them an unparalleled view of the arena. Their approval or disdain can change a gladiator's fate in an instant.

The Terraces of Halagran

The terraces of Halagran, also known as the Stepped Gardens, are located on one of the descending slopes from the city's highest point, where the sorcerer-king Sylas's palace stands. These terraces form a mosaic of miniature fields, maximizing the potential of every plot of land.

Each terrace is supported by sturdy sandstone walls and carefully irrigated by a system of canals and aqueducts originating from the treadle piston pumps located elsewhere in the city. Efficient water use is a top priority here, and every drop is utilized optimally.

The terraces are organized to maximize production. Fruit trees are carefully pruned into espaliers along the walls, thereby maximizing the usable surface for cultivation. Between these trees, smaller plants grow abundantly, their roots intertwined in a vertical farming system that exploits every centimeter of land.

Fast-growing plants are also cultivated in rotation to ensure a constant yield throughout the year. Agriculture here is a science, and every plot of land is managed with near-surgical precision.

The noble quarters are situated on either side of the terraces, benefiting from increased coolness and easy access to water.

Halagran Market

The Halagran market, located below the terraces, is a vital hub for the city's commerce. The market's heart is a vast central gallery, a wide and airy space whose roof is supported by a series of open arches. These stone arches rise majestically to support a roof made of sun-baked tiles. The shade provided by this roof protects merchants and visitors from the harsh arid climate. Under these arches, colorful stalls stretch as far as the eye can see. Here, merchants display all kinds of goods.

Surrounding the central gallery, a large paved square extends, serving both as a resting and negotiation area for visitors. This square is itself framed by covered passages, whose structures are supported by intersecting stone arches. These arches open toward the square, allowing a smooth transition between indoor and outdoor spaces.

Adjacent to these covered passages are the counters of the merchant houses. These are solid buildings, often made of sandstone or other local stone. These counters house the offices and warehouses of the merchant houses and often serve as venues for larger or specialized transactions.

Government

Leader

The sorcerer-king Sylas is a man of impressive stature, with a presence that fills a room upon his entrance. His eyes are nearly entirely black, and his skin bears the marks of age, but his solid build and deliberate movements betray a vigor that defies his years. His clothing is typically made of dark fabrics, adorned with gold thread and precious stones. He often wears a black metal chain around his neck, symbolizing his connection to the earth and the coal mines that are the source of Halagran's power.

Sylas is both a competent administrator and a cunning politician. Educated in various forms of magic and warfare, Sylas knows that power must be defended as much as it is exercised. He is surrounded by an elite personal guard and a council of loyal Templars who assist him in governing and maintaining his influence.

Government Structure

The Templars who assist Sylas in governing are divided into several ranks based on their power and proximity to Sylas. The most powerful among them have their own gardens and are involved in crucial decisions regarding the city's governance and defense. This inner circle also serves as Sylas's personal advisors.

The Guardians: The Guardians are Templars whose role is to maintain order in the city. They are specially trained to enforce laws and protect Sylas's interests.

Administrators: The administrators are Templars who manage the city's daily affairs, from tax collection to overseeing the maintenance of infrastructure, such as the treadle piston pumps and agricultural terraces.

Nobility: Halagran's nobles own the vast savannas surrounding the city. Intrigues within and between noble houses are numerous and bloody, with each noble family seeking to increase the size of their pastures, and each child striving to secure the most favorable inheritance. The Templars must regularly intervene to prevent noble conflicts from hindering the city's agricultural production.

Dwarven Engineers: Representatives of the dwarves whose focus is the maintenance of the irrigation systems and pumps that supply the city with water participate in organizing the maintenance of these structures, in collaboration with the Templars.

Economy and Trade

Local Resources

- Coal: The city's primary economic driver. The surrounding mines provide high-quality coal exported to neighboring city-states.
- Livestock: The savannas around the city are used for livestock farming, providing meat, milk, and leather.
- Craftsmanship: Glassmaking, ceramics, leatherworking, and alcohol distilleries.

Main Imports

Food, metals, textiles, slaves.

Culture and Inhabitants

Halagran's population is shaped by the harsh realities of its mining environment and the overwhelming authority of the sorcerer-king Sylas. The inhabitants, predominantly human but with a notable proportion of dwarves, half-giants, and elves, live in rhythm with coal extraction,

agricultural terrace work, and irrigation canal maintenance.

The city is strictly hierarchical. The Templars and the landowning nobility are the chief supporters of royal authority and dominate Halagran society. Beneath them is a class of free citizens: artisans, independent miners, and merchants who manage the city's daily functions but wield little real power. At the base of this structure are the slaves—crucial to the economy—assigned to coal mines, treadle pumps, terraced fields, and public works.

The Halagran lifestyle is marked by hardship and resilience. Upper classes wear imported fabrics dyed in rich colors, while the majority of the population wear simple, functional, and worn clothing, usually darkened by omnipresent soot. The mine slaves, recognizable by their "black faces" and tattered rags, embody the city's most extreme misery.

The local culture values tenacity, discretion, and obedience. Work is not only a necessity but also a means of escaping social contempt. Public display and celebration are reserved for combat days in the Coliseum, when the entire city gathers to witness the bloody games in which gladiators fight under the impassive gaze of Sylas and the Templars.

Spirituality in Halagran is reduced to a pragmatic fatalism. Respect for the land, the mines, and the rare vital resources is taught from childhood—not as religious dogma, but as a survival imperative. The more superstitious whisper informal prayers to spirits of stone or wind, but no formal cult structures these beliefs.

The figure of Sylas dominates all aspects of civic life. His image is omnipresent in the city's monumental architecture, and his will is enforced without question by the Templars and the Guardians. While Sylas has not declared himself a divine figure, his magical and political power is sufficient to sustain an atmosphere of reverence mingled with fear throughout the population.

Defense and Security

Walls and Fortifications: The city-state is surrounded by massive stone walls, regularly reinforced by defensive towers. The main gates are heavily fortified with portcullises and ditches. War machines are mounted atop the wall towers. The Templars' quarter and Sylas's palace are protected by an additional inner wall.

Military Forces: Halagran is defended by a force of light infantry armed with stone maces and wooden shields; archers with longbows; a shock troop of half-giants equipped with heavy armor and enormous stone clubs; and a cavalry unit mounted on crodlus. The relatively flat terrain around the city and the forage produced by the surrounding savannas make the maintenance and effective deployment of cavalry feasible.

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