

Winter 2023-2024

URBAN

concepts



As the first month of 2024 has flown by and we've entered February and the start of the Year of the Dragon, we have so much to look forward to in the months ahead. As we turn the pages on the calendar, let's take a moment to celebrate the resilience that brought us through the challenges of past years and embrace the opportunities that lie ahead.

In this edition, we share an article on air conditioner filters, a history on popular Oahu hikes and our produce segment showcasing a common local farmers market staple, the red radish.

We hope you enjoy this edition of Urban Concepts and Happy Lunar New Year!

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AIR CONDITIONER FILTERS - IMPROVING THE AIR QUALITY IN YOUR HOME

If there's one thing living through COVID-19 has taught us is that there are certain protocols we all must follow not just when living through a pandemic, but at all times. One area that should always be a priority is keeping the indoor air quality as clean and germ-free as possible.

Most of us spend around 80% of our lives indoors, whether it's at home, at work or at gatherings, and a lot of that time is spent in enclosed environments that relies on a heating, ventilation, and air conditioning system ("HVAC") to circulate the air in the space. Living in this type of environment exposes you to many airborne particles such as mold, dust and pollen. It also exposes you to contagious airborne viruses such as COVID-19. That's why the term and practice of "social distancing", which is from the 1918 flu pandemic, reemerged as a very important method to avoid being exposed to viruses.

In any environment (indoor or outdoor) we are always exposed to particles in the air. It's when those particles are considered "pollutants", is when we should be vigilant and try to lessen the air pollution in our living environment or reduce exposure to it.

In an enclosed indoor environment, we have options to control the air quality and lessen our exposure to any harmful particles in the air. But the indoor environment also encapsulates those air particles and if not filtered well, recirculates them within this environment. This often creates a form of indoor pollution where the air particles release gasses into the air and are a primary cause of indoor air quality problems. In addition, inadequate ventilation can increase indoor pollutant levels by not bringing in enough fresh outdoor air to dilute emissions from indoor sources and not carry indoor air pollutants out of the home. High temperature and humidity levels can also increase concentrations of some pollutants by allowing the air particles to thrive and grow.

Maintaining healthy and clean air quality indoors is a very broad topic that can be narrated in many directions, but for this discussion, we will focus on the HVAC system in the residence and how proper filtration of the air will keep the air quality at a high level.

Good air quality in an enclosed environment with an HVAC system starts with adequate filtration of the air as it circulates throughout the space. The HVAC system in condominiums in many ways works just like people do. We breathe in fresh air into our lungs (our living environment) and exhale (vent) out stale air. And just like you and I, once air has been exhausted out, it needs to be replaced, or made up, with more fresh air. This replacement air is called "makeup air" and it comes in through the intake vents in the space and is cleaned and either cooled or heated through the HVAC system before being pushed out into the space.

During this process, a good filtration system will take the stale air and filter out air particles which may be harmful to the condominium's residents. This clean and purified air is what we live and breathe in. An inadequate filtration system will cause a higher percentage of airborne particles to escape back into the living environment, thus exposing the residents to harmful air particles.

The filtration system in HVAC equipment is based on the Minimum Efficiency Reporting Value rating system or MERV. The MERV rating system is a number rating system that ranges from 1 - 16 where the higher the number, the better the filtration. The 1 to 16 rating will filter air particles from 20% ("1") to 95% ("16"). To give an example, hospitals generally start with a MERV rating of 13 or higher depending on the unit within the hospital - an ICU is always at the highest level.

Periodically we get asked if a higher MERV rating is better? Our answer to this question is that this isn't always the case. A higher MERV rating will cause more resistance in your HVAC system's airflow. As a result, it may have to work harder and become less efficient over time. A very high-rated filter can also result in poor indoor air quality if the filters are not replaced timely and, in the long term, harm your HVAC system, thus reducing the life of the unit.

While the MERV rating you select should be based on your needs, it is recommended a rating of 9 to 12 will be adequate for your home which gives a filtering percentage range of 75% - 90%. This tends to be the most ideal for indoor residential environments.

For residents with Chronic Obstructive Pulmonary Disease ("COPD"), a higher MERV rating is recommended. This will usually be a rating number in the range above 12. Although it wouldn't be recommended for a household, this may be the requirement to filter out as much airborne particles as possible. As an alternative, setting up a portable air purifier would be a great option because these devices use high efficiency particulate air filter or HEPA filter. HEPA filters filter out 99.97% of airborne particles before releasing the recycled air back into the environment.



MERV 11 filter



HEPA filter

Another question we do get asked periodically is “How often do I change my air filters?” Air filters with a higher MERV rating should be changed more frequently, because they are more effective at capturing tiny particles and will become dirty faster. Depending on how often you use your HVAC system, it is recommended that the higher-rated filters (9-12) should be changed every 2 to 3 months.

We hope this article has given you good information about HVAC filters in the home. Replacing your HVAC filters is a small and inexpensive task that can make a big difference for the residents of any home. It improves the indoor air quality, enhances the HVAC system’s performance and can make a living environment healthier.

MERV Rating	Average Particle Size Efficiency in Microns
1-4	3.0 - 10.0 less than 20%
5	3.0-10.0 greater than or equal to 20%
6	3.0-10.0 greater than or equal to 35%
7	3.0-10.0 greater than or equal to 50%
8	1.0-3.0 greater than or equal to 20% 3.0-10.0 greater than or equal to 70%
9	1.0-3.0 greater than or equal to 35% 3.0-10.0 greater than or equal to 75%
10	1.0-3.0 greater than or equal to 50% 3.0-10.0 greater than or equal to 80%
11	0.30-1.0 greater than or equal to 20% 1.0-3.0 greater than or equal to 65% 3.0-10.0 greater than or equal to 85%
12	0.30-1.0 greater than or equal to 35% 1.0-3.0 greater than or equal to 80% 3.0-10.0 greater than or equal to 90%
13	0.30-1.0 greater than or equal to 50% 1.0-3.0 greater than or equal to 85% 3.0-10.0 greater than or equal to 90%
14	0.30-1.0 greater than or equal to 75% 1.0-3.0 greater than or equal to 90% 3.0-10.0 greater than or equal to 95%
15	0.30-1.0 greater than or equal to 85% 1.0-3.0 greater than or equal to 90% 3.0-10.0 greater than or equal to 95%
16	0.30-1.0 greater than or equal to 95% 1.0-3.0 greater than or equal to 95% 3.0-10.0 greater than or equal to 95%
High efficiency Particulate Air filter HEPA*	99.97% of particles in the 0.3-micron range Particles that are larger or smaller than 0.3 microns are captured with a greater than 99.97% efficiency

HISTORY OF POPULAR OAHU HIKES

Lanikai Pillbox Trail

The Ka'iwa Ridge Trail, better known as the Lanikai Pillbox Trail is one of Oahu's most popular hikes and an 80 year old military bunker.

Resembling the shape of an actual pill box, the cement structure contains an almost 2-foot high window opening up to a panoramic view of the ocean. With about enough room to hold three people comfortably, it was once used as a window for soldiers to scout out enemy activity during World War II. In military terms, a pillbox actually means defensive site such as a machine gun pillbox, yet in 1943 the structures at the top of the ridge, often mistaken as "the Lanikai Pillboxes", functioned as Coast Guard Artillery observation stations and were not equipped with defensive armament.

Sometime after WWII, the ridge was sold by the military to a private individual and then it was eventually resold a couple more times to private individuals until the late 1980s. The last private owner proposed a plan to build a home on the site which included intent to drill a hole through the rocks to provide ventilation for the home. Amidst all this, the Department of Land and Natural Resources (DLNR) had just started promoting its Na Ala Hele trail system. This trail system was created in response to trails being lost to urban sprawl development, and since it was already a well-known trail, it was proposed by the Lanikai Association that the state buy the property in order for the state to incorporate the trail into their trail system. As a result, the DLNR now manages the estimated 4-acres of land that surrounds the notable pillboxes, which are considered historic by State Historic Preservation standards, so the state is unable to ever remove them altogether.



The Koko Crater Trail (Koko Head Stairs)

Located in East Honolulu, the Koko Crater Trail once featured about 1,050 railroad ties (or steps) to get to the top. Unfortunately, with wear and tear over time and exposure to the elements, plus a lack of maintenance those 1000+ steps are now reduced to around 800 viable stairs and continuously declining.

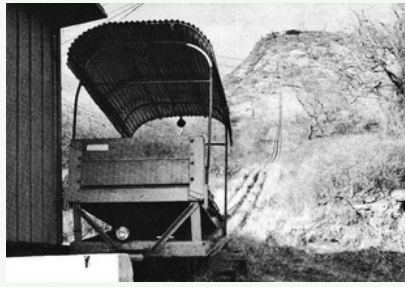
Known as one of the most busy hikes on Oahu and frequented daily by hundreds of hikers of all ages (young, old, residents, tourists, pets), many probably don't think about what the railway was actually used for. Between 1942 and 1943, the US Army installed this rail tramway specifically to transport supplies, equipment and personnel from a base camp (now Koko Head District Park) to the top of the crater. When the US Air Force was established, the site became the Koko Crater Air Force Station and acted as one of two essential radar sites on Oahu. Eventually, due to the rise of new airborne satellite technology, Koko Crater Air Force Station's mission on top of the summit became obsolete and the installation was inactivated resulting in the land and cable car tram being handed over to the City and County of Honolulu.



Old Koko Crater tramway pictures from Hawaii National Guard retiree news website



Since the radar site and tramway's been inactivated 56 years ago, it is more popular than ever with persons coming from all over Oahu as well as regions and countries across the globe, frequenting up to a thousand hikers on a busy weekend or holiday.



Manoa Falls Hike

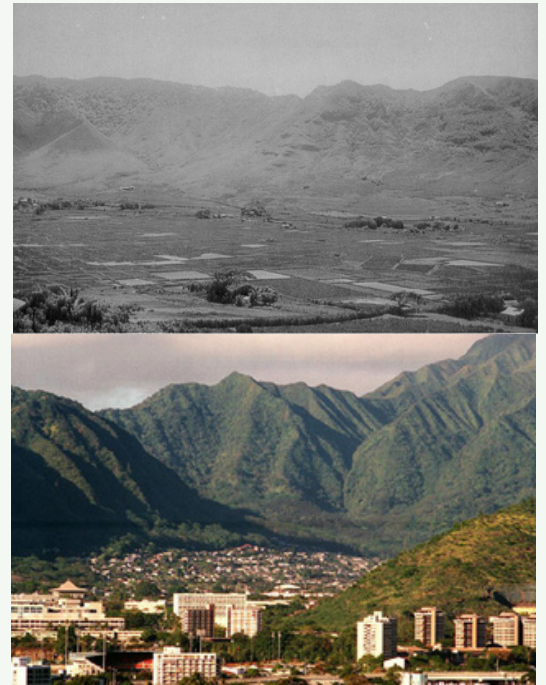
Manoa Valley waterfall or Manoa Falls is a popular destination for both locals and tourists, it is a 150-foot waterfall that drops into a small pool, surrounded by lush tropical vegetation. The waterfall was believed to have been formed over a millennium ago as the result of the erosion caused by a stream that flowed from the top of the valley. The stream water flowed over the edge of the valley, forming the waterfall that we see today. Not only a popular attraction for both locals and tourists, the waterfall has also been used as a location in a handful of Hollywood films, including the 1993 Jurassic Park movie, 2004 Fifty First Dates film, scenes in the newer Hawaii 5-0 tv series as well as a feature on an episode of the 1980's Magnum P.I. series. There are also many stories of the Night Marchers, or ancient Hawaiian warriors linked to Manoa Falls.

Manoa Valley was developed by Western settlers during the 19th century and the waterfall became a popular tourist spot. To make it more visitor accessible, a trail was built leading to the base of the waterfall in the early 20th century. The trail was one of the earlier Hawaiian trails and before it became a popular hiking spot, it was most likely used for bathing, hunting, and gathering plants and wood. Living completely off the land, earlier Hawaiian civilizations used the wood they collected to build canoes, bark to make footwear and even tree sap as a laxative.

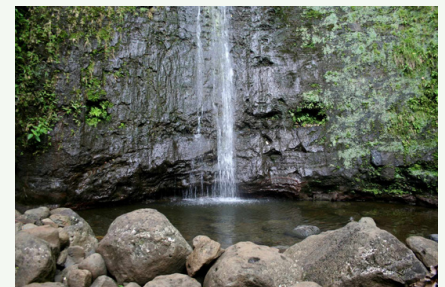
Due to its short length, the Manoa Falls Trail is often considered an "easy" hike but most people don't realize that the closer you get to the falls the wetter and more slick the path becomes, increasing the risk of slipping. Due to the muddy slippery paths, a number of hikers have lost their footing over the years with some not surviving the fall.

Considering Manoa Valley has such a captivating past, including the legends told about it, its rich history as a Hawaiian civilization gathering area plus the previous fall related hiker deaths, it is understandable why some think it's haunted. Regardless, it remains a natural gem that holds dear to the people of Hawaii.

Pre developed Manoa Valley



Manoa Valley now



Makapu'u Point Lighthouse Trail

Recognized by its historic red-roofed lighthouse located at the most eastern point of Oahu, the Makapu'u Point Lighthouse Trail is known for its outstanding views of Oahu's southeastern coastline and is also a great place to view migrating humpback whales in season. Makapu'u means "bulging eye", referring to a Tahitian mythological creature who had eight bright eyes and took up residence on the point. Although the lighthouse itself is off limits, the Makapu'u Point Lighthouse Trail is one of the most popular hikes on the island, due to its paved and well maintained trail making it family and beginner friendly. Before it became a highly frequented hiking trail, the lighthouse was one of the most important aids to navigation in the Hawaiian islands.



In 1888, after an American ship had run aground in the area and some thought the grounding could have been avoided if there had been a light on Makapu'u Point, a petition for the initiation of a light at the point was presented to the Hawaiian government. By 1901, preliminary planning for the lighthouse was enacted, then halted due to the U.S. Government taking control of navigational aids on the island. In early 1906 the fifty-ninth Congress was presented with a report emphasizing the importance of the Makapu'u Lighthouse and by mid-1906, \$60,000 was allocated for construction of the lighthouse. A couple months later, the \$2,500,000 passenger liner Manchuria ran aground off Makapu'u Point and although all passengers and most of the cargo were de-boarded safely, this incident solidified how important and necessary a light was.

Work began during the summer of 1907, and by October 1908 the tower was ready but the lantern room had not arrived yet, therefore delaying the first lighting to finally take place on October 1, 1909. The hyperradiant lens used for the lighthouse, is the largest type of lens used in a U.S. lighthouse.



*Hyperradiant Lens
(old pics & article facts from
lighthousefriends.com)*

On July 1, 1927, the first radio beacon in Hawaii was put into commission at Makapu'u Point. The lighthouse was converted from oil-vapor to 500-watt incandescent electric lamps and a generating plant was set up on Makapu'u Point to supply electricity for the radio beacon. The beacon produced a signal that could be picked up a distance of two hundred miles and was used by both mariners and aviators to determine their position. On January 4, 1974, the Coast Guard automated the Light House Station. Before then, from the time of the first lighting up until 1963 the Lighthouse was serviced by civilian members called keepers. Sometime in 1975, the quarters were secretly used to house prosecution witnesses during the trial of an underworld boss, who was facing federal tax evasion charges in Honolulu.



*Joseph Pestrella, one of
the last civilian members
of the Lighthouse
Service.*

In 1987, the government deemed part of the land surrounding the lighthouse as surplus so the property was surrendered to the State of Hawaii and a group of armed land-ownership protesters took up residence in one of the quarters but after a few weeks, the protesters were evicted. Shortly after, the state demolished the property with the oil house, located near the trail leading to the lighthouse being the only surviving outbuilding. In 2001, the state paid over \$12 million for a larger portion of land around the lighthouse, allowing the state to revamp the parking area near the trail leading to Makapu'u Point and also keeping the coastline in the area free from development allowing for the trail to remain one of the most favored hiking trails on the island.



PRODUCE SHOWCASE:

RED RADISH

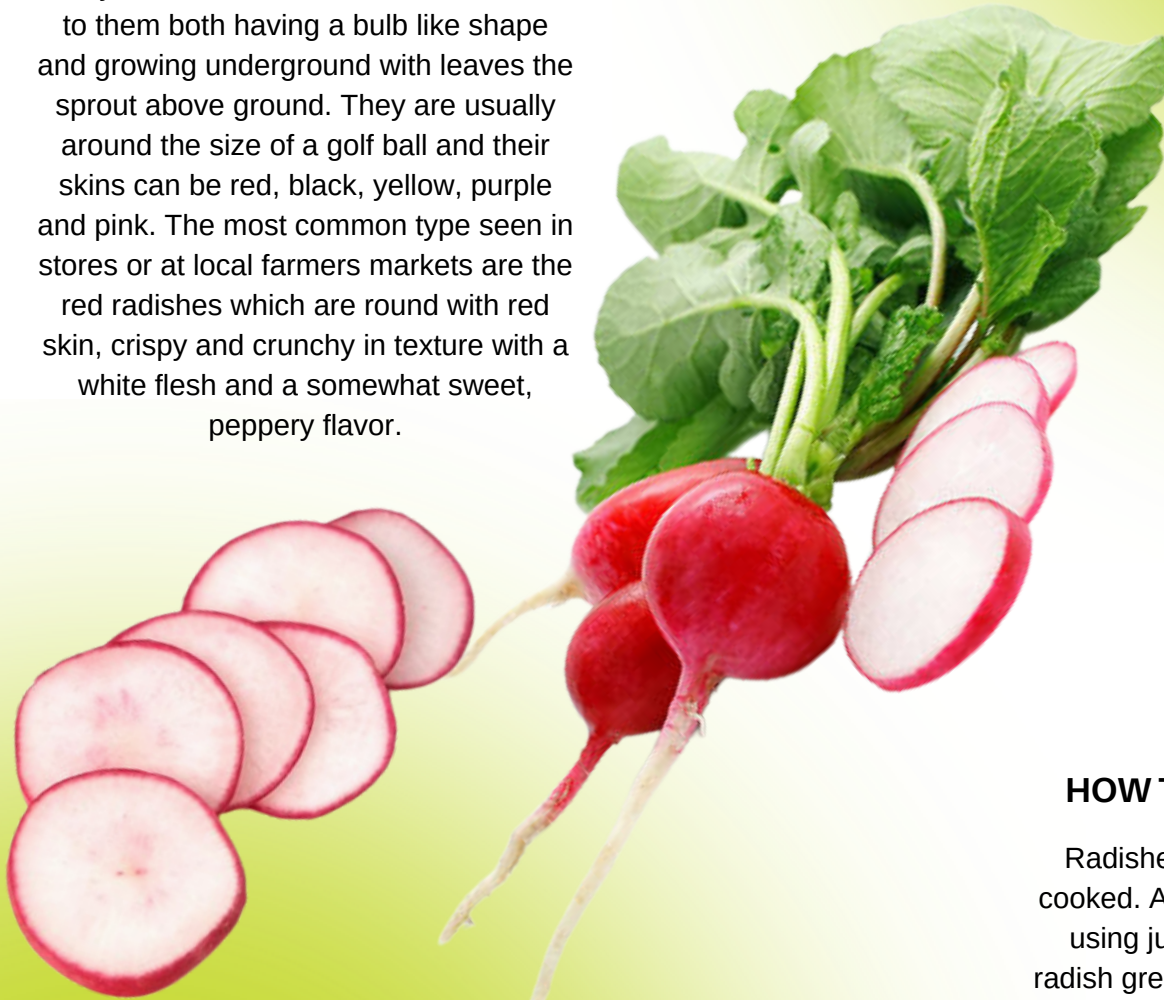
WHAT IS IT?

Radishes are root vegetables that are a part of the cruciferae or mustard family. They are often confused with beets due to them both having a bulb like shape and growing underground with leaves the sprout above ground. They are usually around the size of a golf ball and their skins can be red, black, yellow, purple and pink. The most common type seen in stores or at local farmers markets are the red radishes which are round with red skin, crispy and crunchy in texture with a white flesh and a somewhat sweet, peppery flavor.



NUTRITIONAL VALUE

Low in carbs, and few in calories, with a low glycemic index, radishes are also rich in antioxidants like vitamin C and minerals like calcium and potassium. Radishes have chemical compounds that could help manage your blood sugar levels which could help lower risk of diabetes.



HOW TO SELECT & STORE

When selecting radishes, go for the ones that are firm skinned, with minimal blemishes and any greens attached should look fresh and not wilted. It is better to avoid radishes larger in size due to the bigger radishes tending to be less crisp in texture.

To ensure the radishes are kept fresh, always remove the greens before storing as the tops suck out the nutrients and moisture from the radish when left on. If you opt to keep the greens for later consumption, wrap them in a moist paper towel and they should keep in the fridge for around 2-3 days. Wash the radishes and store them in a plastic bag with damp paper towels to keep them from drying out, if prepped this way, they can stay fresh in the fridge for up to 2 weeks. It is good to note that radishes don't freeze well due to their high water content.

HOW TO PREPARE & SERVE

Radishes can be eaten either raw or cooked. Although most dishes are made using just the radish bulbs, both the radish greens and bulbs are edible. Soak the radishes in iced water for a few hours in order to increase the crispness of them and always prepare them right before use as they lose their freshness once cut. Sliced radishes plus their greens could be added to a fresh salad, whole roasted and served as a side dish, they are often also pickled in order to preserve them. To pickle radishes, you should wash and thinly slice them and put them along with spices and hot pickling juice in sterile canning jars, then seal and let the jars cool overnight. Keep the pickled radishes in a cool, dark place for up to 12 months.