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GOING GREEN

Shawn Palmer

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PROTECT YOUR PARKS:

4 ways to keep facilities clean



The Energy Park in Greenfield PAUL FRANZ PHOTO

arks have long been popular places to congregate. Facilities vary, but many parks offer various amenities — from walking or biking trails to dog runs to fitness areas. And while thousands of individuals and families visit parks each year, when the COVID-19 pandemic was declared in early 2020, parks provided an escape for those who were unable to gather at indoor recreational facilities.

Even though parks offered safe places to have fun outdoors when other options were limited, the pandemic affected the way the parks were managed due to budget cuts and reduced staff. This, coupled with a surge in visitors that continues today, only underscores the importance of all outdoor enthusiasts doing what they can to keep parks clean. The following are four ef-

arks have long been popular fective strategies for individuals places to congregate. Facilito keep parks clean.

1. Leave no trace

According to National Geographic, Leave No Trace is a set of environmental ethics for interacting with the great outdoors. It follows guidelines for using parks in thoughtful, sustainable ways. In addition to carry in/carry out policies for belongings and trash, Leave No Trace components involve making an effort not to disturb and plants and animals, hiking in appropriate areas, and using care when camping. More information about the Leave No Trace movement is available at https://lnt.org.

2. Manage pet waste

The Environmental Protection Agency estimates that, in the

United States, pet dogs produce more than eight billion pounds of feces each year, which equates to three-quarters of a pound per dog every day. Dog waste can contain bacteria and even cryptosporidium, a parasite that infects humans.

Even though animal waste is organic, leaving it alone instead of picking it up can lead to environmental issues, including negative effects on local water supplies. It also smells bad and attracts flies and vermin. It's important for park visitors to pick up after their companion animals.

3. Reduce waste

It can take roughly 450 years for a plastic water bottle to biodegrade. Even if they finally break down, bottles made from polyethylene terephalate (PET) can leave toxins in the soil and threaten fresh water. Use a reusable bottle instead of a single-use alternative when visiting the park. If plastic bottles must be used, be sure to place them in recycling containers around the park.

4. Volunteer

Individuals can volunteer to pick up trash at their local parks. Various conservation groups and organizations organize trash pickup events each year.

Increased usage of parks means the potential for more trash and damage. Everyone can do his or her part to keep parks clean and enjoyable.

GOING GREEN

MAVEN



By Amy Donovan **RECYCLING MAVEN**

Do our local supermarkets really recycle the plastic bags we bring back for recycling? I saw on the news that some big box stores are not doing a good job with this.

C.M., Williamsburg

es, local grocery stores do recycle these materials! Plastic bags and films that are collected in grocery and big box store programs are baled and sold to Trex, a US manufacturer that recycles these materials into plastic lumber and decking materials. Trex features plastic bag recycling guides on their "NexTrex" website: https://nextrex.com/view/ educate#materials1.

For many years, grocery and big box stores have recycled shrink wrap and case wrap that the large shipments of goods come packaged in. Industrial shrink wrap and plastic grocery bags are made of the same type of plastic (HDPE or LDPE, marked #2 or #4), so adding plastic bags to these collections was easy for the stores to do, and these recycling programs are now well established.

It makes economic sense for stores to bale and sell plastic films and wraps rather than to pay to throw them away. Trash disposal is very expensive in this region due to limited landfill space and the closure of local incinerators, so it benefits business, organizations, and households to recycle, rather than trash, recyclable materials.

Two examples of well-managed

PLASTIC BAG RECYCLING

at grocery stores

local plastic bag recycling programs can be found at Stop & Shop and Big Y. Stop & Shop stocks their stores from a central warehouse in Freeport, MA. The warehouse sends food and other goods out to its stores on tractor trailer trucks, and then the trucks backhaul materials to be reused or consolidated for recycling at the central warehouse. These materials include plastic bags and shrink wrap for recycling, and pallets and soda/bread trays for reuse.

Big Y has similar recycling routines in place. Maggie D'Amour, Senior Manager of Environmental, Social and Governance (ESG) at Big Y Foods, Inc., explains their process: "At all of our Big Y store locations, we have collection bins for plastic bags (at store entrances) and/or in our bottle redemption areas. When these bins become full, our porters bring the bags to the larger collection bin in our backroom. We combine this material with the shrink wrap or other film plastic material that is generated in our store, and we send it back to our central warehouse in Springfield, MA through a backhaul on one of the delivery trucks. At the warehouse, the plastic is put through our baling machines and stored on a trailer until Trex comes to pick it up. From there, Trex brings it to their recycling plant to be made into benches, decking, etc. In 2022 we sent Trex 887,900 lbs (or 444 tons) of plastic bags, wraps and films for recycling.'

In 2019, Big Y stopped using single-use plastic grocery bags at all of its stores (only using them during the peak of the Covid-19 pandemic). Even though singleuse grocery bags are no longer used at Big Y, or at Stop & Shop stores that are in cities with a plastic bag ban (such as Greenfield and Northampton), many

Right: At Big Y's central warehouse in Springfield MA, plastic bags are baled and stored in a trailer for pickup by Trex, the manufacturer of plastic lumber.

Below: Trex provides this recycling guide for the bags and films accepted at supermarkets and similar programs. Trex buys bales of this material from 32,000 grocery stores and retail partners across the US, and recycles it into plastic lumber at their plant in Winchester, Virginia. These signs are being distributed for display at all Big Y stores.



RECYCLE BEYOND BAG



different types of bags are accepted in their recycling bins. Acceptable items: clean, empty and dry produce bags, bread bags, Ziploc bags, newspaper bags, retail bags, grocery bags, plastic shipping envelopes (including plastic Amazon mailers), bubble wrap, (deflated) air pillows, case overwrap from packages of water bottles, and the overwrap from packages of toilet paper, paper towels, and napkins. See the Trex link above for pictures of accepted materials.

It's important to note that plastic bags, case wrap, and other flexible "soft plastics" are not accepted in household recycling programs because they get wrapped around and tangled in sorting equipment at recycling facilities.

Are Pringles canisters recyclable?

— Resident at a municipal transfer station

o, these types of canisters are not recyclable because the multiple layers of materials in the container (paperboard, foil, plastic, metal) are not



designed to be separated in the recycling process.

In 2018, the Massachusetts Department of Environmental Protection (MassDEP) launched a useful website and recycling education program called "Recycle Smart." If you visit the RecycleSmart website (recyclesmartma.org) and type "Cardboard food canister" into the Recyclopedia search bar, the result is: "Cardboard food canisters or spiral wound containers are made of mixed materials (paperboard, metal, and plastic) which makes these items not acceptable for recycling in Massachusetts."

In addition to chips, these cardboard canisters are used to package nuts, raisins, and hot chocolate.

Hi Amy, are plastic egg cartons accepted in recycling? — B.A., Easthampton MA

es, clear plastic egg cartons are accepted in recycling. Remove food and paper inserts. Styrofoam egg cartons are not accepted for recycling.

Similar clear plastic containers from food and beverages are also accepted, such as clear plastic clamshells (e.g. berry and salad boxes) and clear plastic cups. Cups should be the type that are crystal clear (such as Dunkin iced coffee cups); printing on the clear cups is OK. Lids and straws must be removed and placed in the trash.

Other plastic cups, such as Styrofoam $^{\text{TM}}$, colored "keg" cups, and

opaque (cloudy) plastic cups are not acceptable for recycling, despite any recycling symbols. If a clear cup is labeled "compostable," it should not go in recycling. Compostable cups can be composted in large-scale municipal or commercial compost programs; they will not break down in backyard compost bins or piles.

To view or print yes/ no recycling guides for western Mass, see the website of the Springfield Materials Recycling Facility (MRF), and click on "What's Recyclable" springfieldmrf.org.

Send your recycling questions to amy@franklincountywastedistrict.org. Amy Donovan is the Program Director at Franklin County Solid Waste District and represents Franklin County on the Springfield Materials Recycling Facility (MRF) Advisory Board. She also created and manages the recycle/compost program at the Franklin County Fair (volunteers are needed, email Amy.) Any opinions expressed here are her own.

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RARE INSECT

spotted nearby

The frosted elfin butterfly COURTESY PHOTO/MASSWILDLIFE



Frosted elfin caterpillar found in only two dozen areas of state

By Julian Mendoza

nywhere from 100 to 10,000 species go extinct each year, a rate 100 to 1,000 times faster than historic extinction rates, according to the American Museum of Natural History. Other species see their habitats condensed by urban development, deforestation and other human impacts.

Sometimes, though, there's good news.

The Massachusetts Division of

this month that the rare frosted elfin caterpillar has been observed in the Montague Plains Wildlife Management Area. The frosted elfin, designated as a "species of special concern" in Massachusetts, is only found at about two dozen sites across the state. According to MassWildlife, the discovery can be credited to two decades worth of restoration and maintenance of the pine barrens habitat through prescribed fire, tree cutting and mowing.

"The unique barrens habitat at Montague Plains [Wildlife Man-

Fisheries and Wildlife announced agement Area] is considered regionally and globally rare, making our restoration efforts at this site especially important for rare animals and plants that require this special habitat type," Brian Hawthorne, MassWildlife's habitat program manager, said in the announcement. "It is incredibly rewarding to see decades of effort paying off."

The discovery "pleasantly surprised" Mark Fairbrother, a Montague resident and amateur naturalist. He explained that the species had been observed in Montague before at the Turners

Falls Municipal Airport, but not "for a number of years" due to public access becoming more restricted.

"It used to be that out there, you could pick blueberries and walk your dog," he said. "It's a lot more strict out there nowadays."

The Montague Plains area, which MassWildlife identified as the largest inland pine barrens habitat in Massachusetts, is a sensible location to find the frosted elfin caterpillar, Fairbrother added.

He explained that the habitat is an "outwash plain" and a remnant of Glacial Lake Hitchcock, the

massive body of water that occupied what is now the Connecticut River Valley thousands of years ago. The habitat is characterized by MassWildlife as having "an open tree canopy and lots of shrubby undergrowth," and "deep, coarse glacial sands" that give rise to the area's "unique features and the specialized plants and animals that live there."

"It has extremely good drainage because there's so much sand there and water drains quickly," Fairbrother described, adding that the habitat is "kind of the opposite of wetlands."

"The plants that are going to be living there — and the creatures that eat the plants — have to be adapted to low water and a highsoil habitat."

According to MassWildlife, efforts to preserve the habitat have included promoting the growth of lupine and wild indigo in an effort to maintain "the open habitat needed by both the frosted elfin and its food plants." According to Assistant Town Administrator Walter Ramsey, maintenance of the Montague Plains has involved keeping portions of the land flat and guarded



The frosted elfin caterpillar COURTESY PHOTO/MASSWILDLIFE

by "doughnuts" of bordering trees that serve as barriers.

plants." According to Assistant
Town Administrator Walter
Ramsey, maintenance of the Montague Plains has involved keeping portions of the land flat and guarded

Surveys have shown that habitat restoration efforts are working, MassWildlife stressed. These efforts have yielded an abundance of barrens plants in-

cluding wild lupine, New Jersey tea, scrub oak and low-bush blueberry. Uncommon and rare moths, butterflies, native bees, the eastern hognose snake, the eastern box turtle, the whip-poorwill, the eastern towhee, the

prairie warbler, the American woodcock and the ruffed grouse are among the animals benefiting from these efforts. The number of rare species that exist in the Montague Plains is "more than normal," said Sean Werle, a long-time Montague resident, aquatic biologist and entomologist.

"I think ecosystems work by having all of their parts intact," Werle expressed. "Any time we can repair something that's broken and doesn't allow all these species to thrive, of course we should fix it."

"Everything that's there got there over a long period of time, has adapted to be there and has a right to be there," Fairbrother added. "It should not be thrown into eternity for pretty shortterm reasons."

Reach Julian Mendoza at 413-930-4231 or jmendoza@ recorder.com.

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The benefits of planting NATIVE SPECIES

Recognition of the many benefits of native plants can make for healthier lawns and gardens and a healthier planet as well



pring and summer present ideal growing conditions for many plants, making these seasons an ideal time to tend to lawns and gardens. Though it's easy to succumb to the temptation of exotic plants, avid gardeners and eco-conscious planters recognize the significance of native plants.

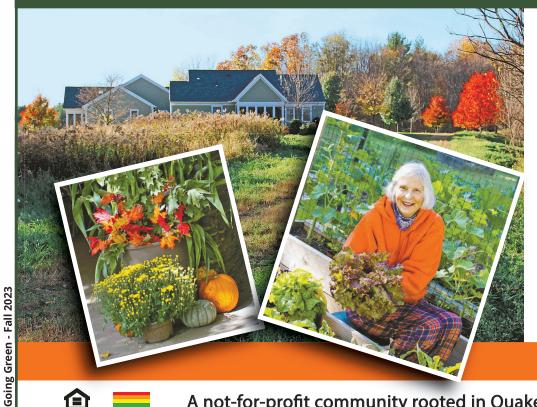
Novices may not realize that native plants are much better for a landscape and the local ecosystem it calls home. Recognition of the many benefits of native plants can make for healthier lawns and gardens and a healthier planet as well.

Native plants are built for local climates

One of the issues gardeners who plant exotic plants run into is keeping those plants thriving when weather turns harsh. For example, exotic plants may require extra watering in areas that experience drought or even

long periods without precipitation in spring and notably summer. The United States Environmental Protection Agency reports that at least 40 states anticipate water shortages by 2024. Planting native plants can help to combat those shortages by reducing the need to water

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plants if conditions become dry in late spring and summer.

Native plants save money

It's also important to note that native plants save homeowners money. Because they're capable of thriving in local conditions, native plants tend to require less watering, which can hep homeowners reduce their utility costs. But native plants also require less upkeep, which means homeowners can save on potentially costly, not to mention eco-unfriendly, pesticides and other amendments in order to maintain the look of exotic plants. And though it's not always the case, exotic plants tend to cost more at nurseries than natives.

Native plants save gardeners time

In addition to saving money, native plants don't require as much attention. Though spring and summer is a great time to be in the yard, it's also a great time to be out and about. Because native plants thrive in local conditions, gardeners won't need to spend much of their free time

tending to them. Exotics tend to require a lot of extra attention and effort, especially when conditions become harsh. Spending more time outdoors in harsh weather does not appeal to most gardeners.

Native plants blend in with an existing landscape

Native plants look natural within an existing landscape, adding some instant aesthetic appeal without breaking the bank. When planting exotics, homeowners may feel a need to redesign their entire gardens to create a certain look (think Japanese garden). That can quickly consume a budget and take up a lot of free time in both the short- and long-term.

Planting season marks a great time to revitalize a landscape. Choosing native plants when doing so pays numerous dividends for homeowners and the planet they call home.

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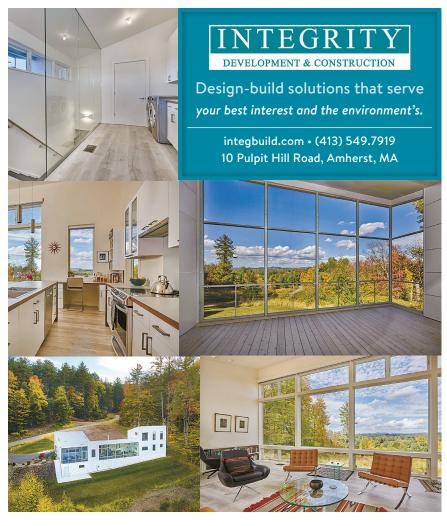
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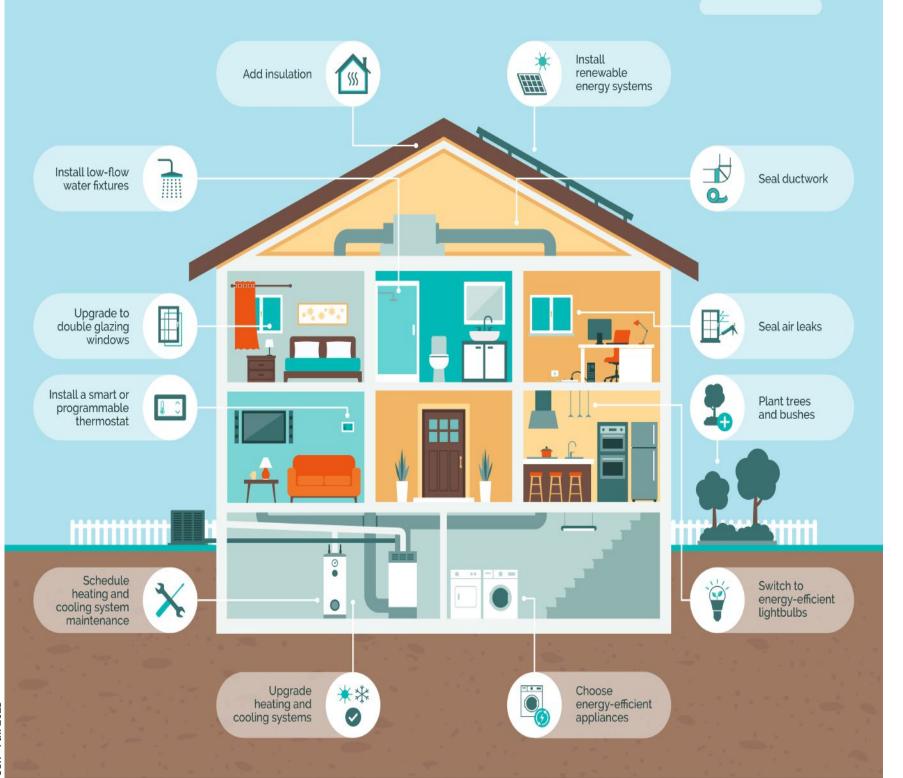
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SUSTAINABLE HOME IMPROVEMENTS





The benefits of ENERGY-EFFICIENT HOMES

A recent survey from the National Association of Home Builders found that energy-efficient features are among the most sought-after 'must-haves' among homebuyers

onsumer efforts to be more eco-conscious are more and more noticeable. For proof of that, one need look no further than the increase in vehicle charging stations. Such stations are more accessible than ever and illustrate that consumer preference is increasingly leaning toward products that leave as small a carbon footprint as possible.

Another indicator of a growing interest in eco-friendly products is the popularity in energy-efficient homes. In fact, a recent survey from the National Association of Home Builders found that energy-efficient features are among the most sought-after

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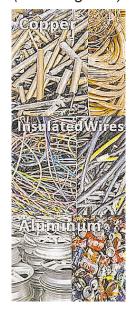


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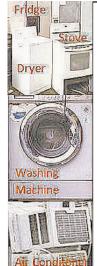


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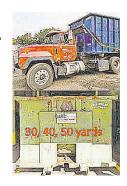
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'must-haves' among homebuyers. Among those surveyed, 83 percent desired Energy Star-rated windows, 81 percent wanted Energy Star-rated appliances and 80 percent preferred energy-efficient lighting.

Though eco-conscious sensibilities compel millions of homeowners to make their homes more energy-efficient, that's not the only reason to upgrade your home. The following are a handful of the many benefits of energy-efficient homes.

Save money

Inflation was one of the biggest stories of 2022, as the cost of living rose dramatically in the wake of world events. According to data from the U.S. Bureau of Labor Statistics, inflation led to an overall 6.5 percent increase in prices. But that increase was dwarfed by the cost of electricity, which increased by 14.3 percent in 2022. Energy-efficient appliances can help homeowners overcome that spike, as the U.S. Department of Energy indicates up-



grading to such products can help homeowners reduce their energy costs by as much as 30 percent.

Improve resale value

As the NAHB survey indicates, modern homebuyers want energy-efficient homes. They're also willing to pay more for such homes. Research from the mortgage lender Freddie Mac found that homes with energy-efficient ratings sold for nearly 3 percent more on average than homes without such ratings.

Live healthier

The benefits of energy-efficient homes aren't just economic,

though health-related benefits certainly produce an economic incentive as well. According to the American Council for an Energy-Efficient Economy, insulation and air sealing protect individuals from heat waves and other ripple effects of climate change. The ACEEE notes that weatherization can improve indoor air quality and comfort, a notable benefit for asthma sufferers and seniors. In fact, the ACEEE estimates that integrating energy efficiency programs in homes could reduce seniors' risk for falls in their homes, potentially saving \$2 billion in fall-related health care costs over the next decade, and improve asthma outcomes, which could reduce health care costs by as much as half a billion dollars.

Energy-efficient products and practices pay numerous dividends, making them a worthy expenditure for any homeowners looking to upgrade their homes.

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abits can be hard to kick. Many people need a unique changes every year. catalyst in order to ditch habits they've long wanted to put in their rearview mirrors. New Year's Day is one notable example of a unique event that compels

Though it might not be a cause for celebration like the dawn of a new year, increased awareness of climate change and its effects could be the catalyst many people efit the planet. These eco-

millions of people to make positive need to make positive, planetfriendly changes to their daily routines.

> Driving habits are one area where individuals can alter their daily routines in ways that ben

friendly alterations can be instituted each day by individuals who want to do their part to combat climate change.

CONTINUED ON PAGE 14



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Avoid aggressive driving

Aggressive driving is both a safety risk and a threat to the environment. According to the Oak Ridge National Laboratory, aggressive driving can lower gas mileage in light-duty vehicles by as much as 40 percent in stopand-go traffic and by as much as 30 percent at highway speeds.

Avoid idling

Many drivers have long relied on idling to warm up their vehicles on cold mornings. However, the South Carolina Department of Health and Environmental Control notes that modern vehicles do not need warming up in temperatures above 0 degrees Fahrenheit. It's important that drivers recognize this, as idling wastes fuel and increases the amount of vehicle exhaust in the air. Vehicle exhaust increases air pollution and contains pollutants that have been linked to asthma, additional lung diseases and heart disease. A far more effective, and considerably less harmful, way to warm up a vehicle is to do so for 30 seconds

Driving habits are one area where individuals can alter their daily routines in ways that benefit the planet.

and then drive slowly for the first few minutes.

Purchase a fuel-efficient vehicle

Drivers looking for their next vehicle can prioritize fuel efficiency if they want their driving habits to have a smaller carbon footprint. The Department of Energy and the Environmental Protection Agency provide information on fuel efficient vehicles, and that information can be ac-

cessed at Fueleconomy.gov. In addition, the EPA's Green Vehicle Guide notes that electric vehicles, plug-in hybrids, hydrogen fuel cell vehicles, and cleaner burning gasoline vehicles are among the more efficient and less polluting cars and trucks on the market.

Make fewer trips

The Fremont Green Challenge reports that more than half of all driving trips in the United States

are taken for social, recreational, shopping, or family/personal errands. By combining these trips, drivers can greatly reduce their driving miles. Fewer trips conserves fuel and can reduce air pollution.

A few simple tweaks to drivers' daily habits can benefit the plant in myriad ways.

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DEEP SEA MINING PERMITS



may be coming soon

United Nations authority will soon need to begin accepting mining permit applications

By Victoria Milko **Associated Press**

he International Seabed Authority - the United Nations body that regulates the world's ocean floor - is preparing to resume negotiations that could open the international seabed for mining, including for materials critical for the green energy transition.

Years-long negotiations are reaching a critical point where the authority will soon need to begin accepting mining permit applications, adding to worries over the potential impacts on sparsely researched marine ecosystems and habitats of the deep sea.

Here's a look at what deep sea mining is, why some companies and countries are applying for permits to carry it out and why environmental activists are raising concerns.

What is deep sea mining?

Deep sea mining involves removing mineral deposits and metals from the ocean's seabed. There are three types of such mining: taking deposit-rich polymetallic nodules off the ocean floor, mining massive seafloor sulphide deposits and stripping cobalt crusts from rock.

These nodules, deposits and crusts contain materials, such as nickel, rare earths, cobalt and more, that are needed for batteries and other materials used in tapping renewable energy and for censes have been issued so far, everyday technology like cellphones and computers.

Engineering and technology used for deep sea mining are still evolving. Some companies are

looking to vacuum materials from seafloor using massive pumps. Others are developing artificial intelligence-based technology that would teach deep sea robots how to pluck nodules from the floor. Some are looking to use advanced machines that could mine materials off the side of huge underwater mountains and volcanoes.

Companies and governments view these as strategically important resources that will be needed as onshore reserves are depleted and demand continues to rise.

How is deep sea mining regulated now?

Countries manage their own maritime territory and exclusive economic zones, while the high seas and the international ocean floor are governed by the United Nations Convention on the Law of the Seas. It is considered to apply to states regardless of whether or not they have What are the signed or ratified it. Under the treaty, the seabed and its mineral resources are considered the "common heritage of mankind" that must be managed in a way that protects the interests of humanity through the sharing of economic benefits, support for marine scientific research, and protecting marine environments.

Mining companies interested in deep sea exploitation are partnering with countries to help them get exploration licenses.

More than 30 exploration liwith activity mostly focused in an area called the Clarion-Clipperton Fracture Zone, which spans 1.7 million square miles between Hawaii and Mexico.

Why is there pressure on the ISA to establish regulations now?

In 2021 the Pacific island nation of Nauru – in partnership with mining company Nauru Ocean Resources Inc., a whollyowned subsidiary of Canadabased The Metals Company – applied to the ISA to exploit minerals in a specified deep sea area.

That triggered a clause of the U.N. treaty that requires the ISA to complete regulations governing deep sea exploitation by July 2023. If no regulations are finalized, Nauru can submit an application to conduct the mining without any governing regulations.

Other countries and private companies can start applying for provisional licenses if the U.N. body fails to approve a set of rules and regulations by July 9. Experts say its unlike it will since the process will likely take several years.

environmental concerns?

Only a small part of the deep seabed has been explored and conservationists worry that ecosystems will be damaged by mining, especially without any environmental protocols.

Damage from mining can include noise, vibration and light pollution, as well as possible leaks and spills of fuels and other chemicals used in the mining process.

Sediment plumes from the some mining processes are a major concern. Once valuable materials are taken extracted, slurry sediment plumes are sometimes pumped back into the sea. That can harm filter feeding species like corals and sponges, and could smother or otherwise interfere with some creatures.

The full extent of implications for deep sea ecosystems is unclear, but scientists have warned that biodiversity loss is inevitable and potentially irreversible.

"We're constantly finding new stuff and it's a little bit premature to start mining the deep sea when we don't really understand the biology, the environments, the ecosystems or anything else," said Christopher Kelley, a biologist with research expertise in deep sea ecology.

What's next?

The ISA's Legal and Technical Commission, which oversees the development of deep sea mining regulations, will meet in early July to discuss the yet-to-be mining code draft.

The earliest that mining under ISA regulations could begin is 2026. Applications for mining must be considered and environmental impact assessments need to be carried out.

In the meantime, some companies – such as Google, Samsung, BMW and others - have backed the World Wildlife Fund's call to pledge to avoid using minerals that have been mined from the planet's oceans. More than a dozen countries - including France, Germany and several Pacific Island nations - have officially called for a ban, pause or moratorium on deep sea mining at least until environmental safeguards are in place, although it's unclear how many other countries support such mining. Other countries, such as Norway, are proposing opening their waters to mining.

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