

Asteroids and Water

Carbonaceous asteroids like Ryugu and Bennu contain a large amount of water by weight percent in their mineral structure, so it's not loose water like ice or liquid water, but in clays and phyllosilicates, the water is bound in these structures.

And there's a thought that these kinds of asteroids delivered the water that's the source of the Earth's oceans.

There's also an interest in studying these asteroids and their water content for something called in-situ resource utilization, which is rather than if you wanted to travel to the outer solar system or if you wanted to build a space station rather than bringing that water from Earth.

You can mine the asteroids for this water and use that to make not only drinking water but rocket fuel and propellant.

So this is a way where we can use the asteroids as just living off the land or, in this case, living off of space.