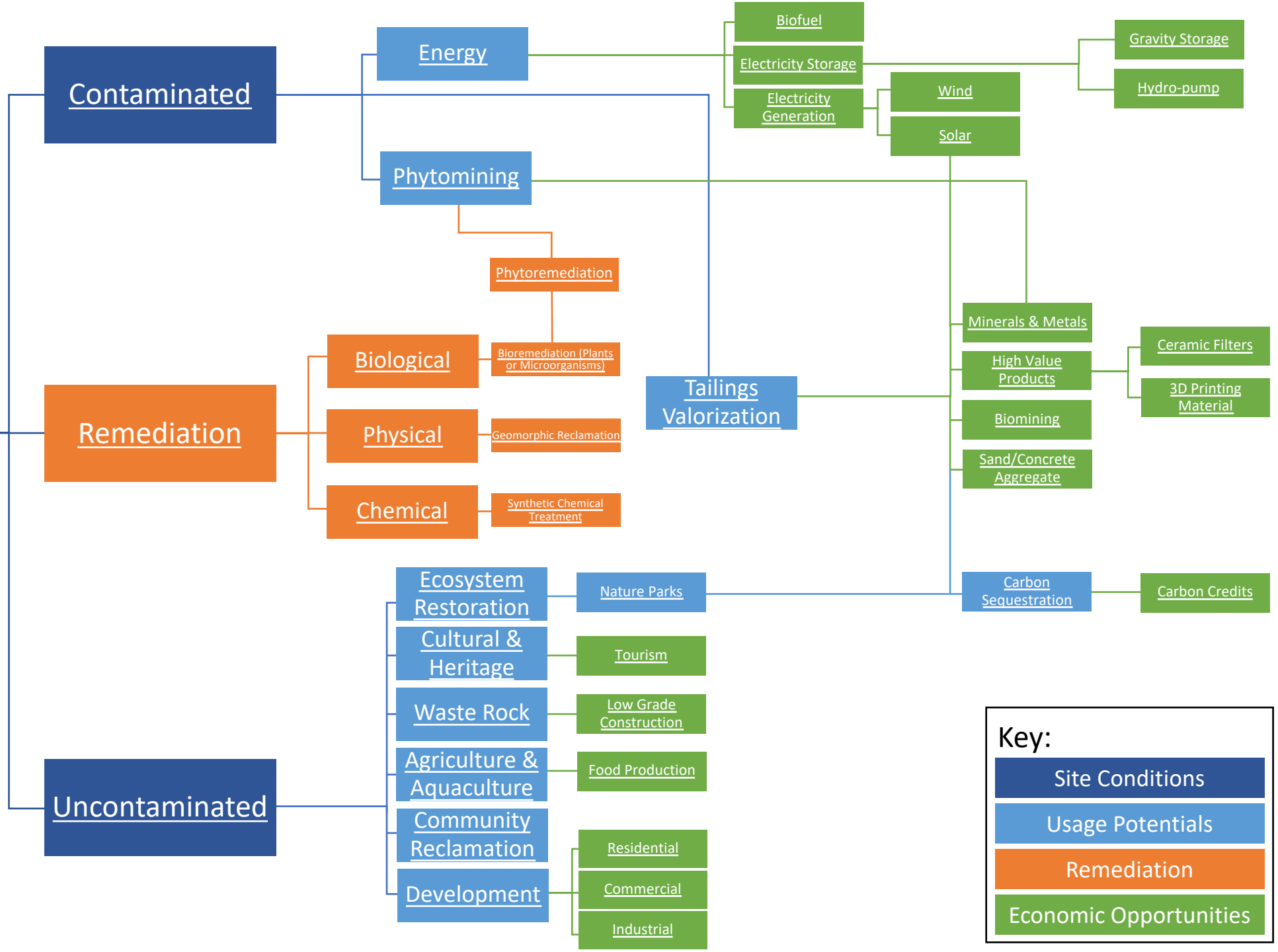


# Circular Economy: Mine Land Potential



**Key:**

- Site Conditions
- Usage Potentials
- Remediation
- Economic Opportunities



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## Circular Economy: Mining Land Potential

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*CCSI's **Circular Economy: Mine Land Potential** map is intended to be used by companies, researchers, academics, civil society, and government officials as a general guide and visualization tool for post-mining land-use potentials. Innovative land uses can turn mine land, which has historically been a liability, into an asset, generate economic opportunities, contribute to sustainable development, and enable progress towards a net-zero economy while avoiding detrimental damage of critical natural resources and habitat. Under each concept in the visualization tool is a hyperlink to a study, article, video, podcast, or other example evidencing the viability of the post-mining land-use practice.*

Shifting from a linear economy to a circular economy—which relates to preserving, sharing, extending, leasing, repairing, reusing, and recycling existing materials while reimagining the methods and practices of materials usage and their life cycles—is crucial in achieving sustainable development and decarbonization. One of the core stages of implementing circular principles in the mining industry is in post-mining closure, ensuring that former mine land can be repurposed to provide sustainable development benefits to the host community and country while avoiding a [devastated landscape](#).

Globally, [mining takes up 57,277 km<sup>2</sup> of land](#), and hundreds of thousands of these mining sites have become [abandoned](#). In particular, contaminated mine land is at the root of significant environmental and health risks. Half of all metal mining occurs at less than 20km from protected land, and in the United States, the mining sector is considered to be [the nation's largest toxic polluter](#). [Acid mine drainage](#), a process that occurs as sulfides leach from mines to nearby water sources, creating sulfuric acid, is especially detrimental as it can occur indefinitely. Today, there are no examples of full acid mine drainage mitigation once leaching occurs on a large scale. Moreover, global decarbonization has increased pressure on land given the [land intensiveness of](#)

[net-zero solutions](#). To ensure enough land is available for decarbonization and conservation efforts, it is essential to repurpose mining land instead of abandoning it.

To achieve this, sustainable mine closure must be incorporated in the planning phase of a mine and in its engineering design, before extraction even occurs. Using mine land for other economically viable potentials becomes exceedingly difficult after mining has been formally completed; let alone if the mining land has been abandoned. If abandoned, the government is faced with a land ownership dilemma of selling or holding the land, paralyzing land purposing that often results in the land becoming a liability. To avoid this, mining companies must re-envision their interaction with the land and with the community, so that lands can be used for innovative purposes as seen in the **Circular Economy: Mine Land Potential** map.

There are no simple solutions to these problems, as all mines and surrounding mining communities are unique. Sustainable post-mine land use requires [evaluation of limitations and potentials](#) on a case-by-case basis. The process for such case-by-case decisions should respect the [rights of Indigenous Peoples or other customary communities](#) that have legitimate claims over the mined land, were adversely affected by the mining activities, or stand to be affected by future proposed uses of the land. Such [communities should be closely involved in decision-making concerning the land](#), consistently with the requirement for free, prior, and informed consent, and other human rights. In some cases, land repurposing is even more successfully achieved when the [community is the main the owner and operator](#) of the land transformation.

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