

RECLAIMING SURFACE MINED LAND TO WATERFOWL HABITAT

A Face Lift for Our Scarred Lands

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Effects of Surface Mining on Geology and Wildlife

Surface mining for mineral resources is widely practiced within California and around the United States. Minerals are mined for sale off site and therefore backfilling of the excavation site is not a feasible option. Surface mining leaves a huge hole in the ground, anywhere from less than an acre to many square miles. Native soils and bedrock are removed, vegetation is destroyed, and animals living on site are displaced and may actually become extinct in the affected area. Changes in our ecological attitudes have prompted mining companies to establish sound reclamation practices at sites of surface mines. One of the simplest and most cost-effective remediation options is to turn an exhausted surface mine into a waterfowl habitat.

Common Obstacles to Reclamation by Waterfowl Habitat

The need for a reliable, legally obtainable, and sufficient water source is the foremost factor that must be addressed in any plan to create a suitable waterfowl habitat from an abandoned surface mine. Other obstacles that must be overcome are the presence of steep banks, the absence of shallow areas, the lack of inlets or protected bays, and an almost total lack of vegetation for food and cover (most surface mines are steep, deep, rounded, and barren).

Solutions for Reclamation to a Waterfowl Habitat

The creation of sloping shorelines into the pit area is imperative to favorable habitation by waterfowl. Benched slopes extending 30 feet from shore

and having 3:1 (horizontal/vertical) slopes are recommended due to the fact that although adult ducks can negotiate fairly steep banks, it is impossible for young ducklings to negotiate this type of embankment.

An ideal habitat should have a 25% shallow water feeding area, a 25% intermediate area, and 50% deep water. Feeding bays or inlets at the perimeter of the pond area provide good feeding areas and also protected brood areas, which reduce duckling mortality due to aggression over territories. Feeding areas should be 6 to 12 inches deep and must be minimally affected by changes in water levels.

Nesting and resting areas are easily provided protection from predators by creating many small islands. A predator trench can also be used in pits that may be too deep or lack sufficient materials to create individual islands.

Revegetation is critical to the establishment of a suitable waterfowl habitat and accomplishes three distinct objectives: stabilization of shoreline erosion; providing food and cover for wildlife; and the creation of an aesthetic atmosphere.

Summary

Reclamation of surface mined land to suitable waterfowl habitats is an important remediation technique. Such reclamation is cost-effective and not only promotes the continued welfare of waterfowl, but encourages other wildlife species to rehabilitate the area providing an important natural resource to the community.

Bibliography

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