The nineteenth-century American West underwent a dramatic demographic, cultural, and ecological transformation, with the newly emerging Euro-American population imposing a new rational order on the region’s landscape. It is an understatement to say that the American West emerged from the nineteenth century with an economy that extracted the West’s riches for commercial and industrial consumption. It took a lot of industrial invention to conquer the plains: barbed wire to control cattle; windmills to fill stock tanks and irrigate little gardens and hayfields; railroads to open otherwise unlivable spaces and bring buffalo hides and buffalo bones and then cattle and wheat to market; and gang machinery to plow, plant, and harvest big fields. A new set of commercial beliefs gave the land itself a market value that it did not possess earlier. Euro-Americans devised prescriptive ways of dividing the land as private property, and creating legal mechanisms to protect the new owners’ claims. The largely European people who resettled the American West imposed on these landscapes a new cultural ordering, turning natural “things”– animals, rocks, fish, trees, and the land itself – into commodities that could be bought and sold in an expanding continental and global marketplace. Fur-bearing animals were skinned and their pelts sold in distant markets; trees were hewed and sawed into construction materials; minerals were extracted from mountains and the ores refined into valuable metals; and grasslands themselves, prized for the crops they would produce, were made over into rectangular plots for single-crop-fields that continues today.

The California Gold Rush and the several mineral rushes that followed across the North American West increased pressure on Native American homelands, brought an in-rush of prospectors to numerous tributary streams, and contributed to the appearance of “instant” mining camps and towns. Miners destroyed Native American dwellings, fishing places and vegetation to gain access to mineral deposits increased bank erosion and the siltation of streams. Even more disruptive to western streams were hydraulic mining techniques, where highly pressurized nozzles were used to sluice away entire hillsides to expose mineral deposits. Mineral rushes had far-reaching consequences beyond the local places where mining took place. Western landscapes took on very different appearances as forests were turned to acres of tree stumps, mineral-rich hillsides were sluiced into tailings heaps, and valley lowlands were ditched, drained, and fenced into productive agricultural enterprises. For example, mining enterprises, some of them operating for more than a century, have left a toxic legacy of mine tailings that continues to seep into streams and underground water reservoirs and polluted waterways in places such as southern Arizona, western Montana, and northern Idaho’s Silver Valley. It played a key role in effecting the transfer of western public lands to private hands and in supporting that ownership through massive spending programs on railroads, dams, and irrigation. It coerced Native American tribes into signing treaties and forcibly removed the tribes to reservations and, in the process, vastly expanded the “public” domain. The former native lands were then made available for resettlement under a series of land laws.

 The introduction of steam technology during the last half of the nineteenth century revolutionized the extraction of natural resources and gave humans the ability to haul goods across difficult terrain and against river and tidal currents. Steam power, especially in the form of the railroad lines that increasingly transected the West, concentrated the forces of the Industrial Revolution upon the western landscapes. Railroads provided a technical means for conquering geography, for closing distance and time. The new steel rails that began to transect the West in the half century following the Civil War provided the critical infrastructure for economic development and accelerated changes to the western landscape. The increasing miles of railroads provided the critical infrastructure for transporting heavy capital equipment to centers of extraction and carrying mineral, lumber, and agricultural goods to urban marketing centers in the interior West and Pacific coastal ports. Nineteenth-century railroad promoters referred to their new lines in terms of “opening up” new lands and “untapping” the wealth of “unoccupied” districts. As such, railroads were signs of progress and forward movement, bringing new towns into being and advancing the prosperity of the nation state. As use of the new form of energy spread across the region, entrepreneurs developed integrated production and marketing systems: moving fleece, hides, and other materials to milling centers; shipping mineral ores to smelters and reduction facilities; transporting logs to sawmills; and conveying agricultural goods on rail lines to distant markets.

Stunningly visible physical changes accompanied this new rational ordering of the western landscape. Advances in technology have always given humans greater influence to shape their physical surroundings. Horses and oxen were slow but furnished sufficient Westward Expansion energy power for plowing, hauling logs, pulling wagon loads of goods to market, and a variety of other tasks. Waterways, too, provided convenient “natural river highways” for moving people and produce. In truth, during the last half of the nineteenth century, western landscapes were being scripted into settings for commodity production.

The General Mining Act of 1872 was a statute that combined two laws that were passed in 1866 and 1870. The 1866 Mining Law was the first law governing mining operations in the United States. The intent of the Mining Act was to encourage people to move westward by allowing them to stake unpatented mining claims, explore for minerals, and develop and process mineral deposits on unclaimed land. If valuable minerals were found, the claimholder could patent or purchase titles to the land for $5 an acre. Owners of the land then had access to all of minerals and other resources found on their land.

Stories of fortunes made during the Gold Rush brought many immigrants to the United States. People came from China, Italy, Ireland, and Germany, and they were involved in digging tunnels, loading minerals onto carts, cutting timber, and caring for the animals. In addition, experienced Mexican miners were in great demand for working gold and silver deposits. At the time the Mining Act was passed most of the miners were individuals with small pick and shovel companies. The early miners practiced placer mining. Placer mining is done several ways, but it basically involves searching for loose gold or silver flakes and nuggets near the earth's surface. Individuals would use a pick, a shovel, a pan, and a bucket could mine using the placer method. They would work day and night in search of precious metals while they dreamed of getting rich quickly…it wasn’t until later that corporate equipment and mining companies would spackle the landscape.

1. How did the idea of private ownership of property become popular during Westward expansion?
2. Discuss four different types of economic development in the West.
3. What were the consequences of the towns in the West? How did they spring up and what problems would that have caused?
4. Explain how mining affected the silt and banks of the streams and rivers.
5. **Sluice**-what is it, look it up, is it an environmentally friendly practice? Why or why not?
6. What were the consequences of mining enterprises aside from erosion?
7. How did the idea of private ownership involve the federal gov’t?
8. Aside from railroads, what was used to transport goods?

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**Enrichment:** Federal Laws Affecting the Environment-what is the purpose of each piece of legislation?

The Land Ordinance of 1785

The Homestead Act of 1862

The Newlands Act of 1902

Railroad land grants

Forest Reserve Act of 1891

Carey Act of 1894

1. Who was supposed to benefit from it?
2. How did it impact the natural environment?
3. What were its short-term and long-term effects?
4. What was the effect of the Gold Rush on California's environment?
5. What other natural resources were found in the West? How were they used? By whom?
6. Consider the effect that human activities have had on the Western environment throughout history. How was it possible to alter landscapes and change ecosystems?