Anyone who has flown over the Intermountain West has likely wondered about the origins of the sublime and bizarre landforms below—smooth circles, steep cuts, uniform piles, concentric terraces, chopped-off peaks, and mysterious polygons in strange concentrations of whites, reds, greens, and blacks. Anyone who has wondered about these landscapes and then read Alan Berger’s *Reclaiming the American West* will be left with one practical answer: mining—and many more questions.

The questions follow complicated meanders. If one follows them, one comes see how these intermountain landscapes—cut and framed by the deceptively reassuring lines of section, township, and range—were created by such forces as frontier quests, suburban dreams, far-away wars, cultural demands, political proposals, and a seemingly ubiquitous taste for French fries.

Berger’s research traces many of these meanders while treating the emerging typology of the post-mine landscape of the American West as a related set of site challenges. Jurors argued for the importance of his work based on its timeliness, his unique research methods, and the potential generalizability of lessons drawn from reclamation on such a vast scale.

**A Ubiquitous Presence**

Berger notes that active and abandoned mines now cover more than 100 million acres of the Intermountain West. In 1977, the federal Surface Mining Control and Reclamation Act (SMCRA) required planning for the eventual reclamation of these mines. As a result, the Western landscape, already shaped by such large-scale human uses as livestock grazing, water diversion, logging, national parks, and mining is now set to be further recontoured by the curious new activity of reclamation.

As Berger points out, the Surface Mining Law now means mining can be considered no more than a temporary land use. Yet each form of mining (surface, underground, coal, and hard-rock) requires a unique approach to reclamation and presents a different set of regulatory challenges. And despite the best reclamation techniques, some impacts persist even in reclaimed lands. By-products of mining operations such as air pollution from smelters, toxic runoff, and contaminated soil constitute a legacy that will endure in landscapes and communities of the American West for ages.

In effect, Berger writes, mining creates a “fluid process of landscape production, and it sets off a chain of events perpetually fueled by cultural needs.” These cultural demands—for copper, gold, coal, and even for phosphate to process frozen potatoes—are what ultimately shape the land around us.

Through word, cartography, mapping and image, Berger examines this intricate regional story. He explores the large-scale flows of resources that affect single sites. And he presents an overview of key determining elements: the implications of the grid survey system; the West’s particular context of barbed wire and local hydrology; and the Surface Mining Law’s requirement that mined land be returned to its “approximate original contour.”

**Ties to Larger Issues**

Berger’s deep look at these Western states of rectangular perimeters and wild topographies is captivating in its own right, but the strength of his research lies in its broad applicability. The same questions that Berger asks about the reclaimed, post-mine landscape of the Intermountain West can be asked about any piece of remade land: decommissioned military sites on the West Coast, industrial brownfields in the Midwest, and war-altered places and abandoned cities all over the globe.

Acknowledge history, or cover it in fresh turf? Include industrial topography as part of a landscape narrative, or return it to its “approximate original contour”? Approach legacies of contamination honestly, or use pleasantly green landscapes as tools of comfort and deception? Follow the urban-renewal model of easily cleared and developed superblocks, or proceed slowly and carefully?

Because of its desire to establish such a broad vision, *Reclaiming the American West* should be seen as kin to such other books as Rachel Carson’s *Silent Spring*, Eric Schlosser’s *Fast Food Nation*, and Marc Reisner’s *Cadillac Desert*. Such books call for serious rethinking of the way we do things. Rather than solely addressing local places, they explore the global networks that affect them.

Berger sees the mined landscape as one challenge among many which are created by American cultural demands. Mining of the West—along with grazing, suburbanization, and other familiar land uses—supports the larger patterns and everyday decisions of American consumption.

The findings of such work can be alarming at any scale. For example, on pp. 31-32, Berger discusses issues surrounding the reclamation of the Rocky Mountain Arsenal, north of Denver.

Beginning in 1993, the Rocky Mountain Arsenal was reclaimed to be the nation’s largest urban wildlife refuge, now known as the Rocky Mountain Wildlife Refuge. Guided public tours point out abundant fauna species and unique habitat. Neighboring Commerce City’s Office of Economic Development promotes the Refuge as a “natural” wildlife asset for all to enjoy and a place to discover nature right in the city!
Prior to becoming a refuge, the Arsenal was home to chemical weapons manufacturing and munitions and pesticide production for more than three decades. The U.S. Environmental Protection Agency once believed the Arsenal to contain the most toxic square mile of land on the planet! In late 2000, almost eight years after the site was opened for public tours, ten Sarin (a nerve agent) bombs were unearthed by a construction crew working near an area open to the public. Tours of the wildlife refuge by schoolchildren were canceled during the ensuing process to dispose of the bombs.

The U.S. Department of the Interior, in cooperation with the U.S. Army, manages the Arsenal and Refuge. Reclamation activities are estimated to cost two billion dollars and are expected to continue until the year 2011. The Arsenal is home to a winter-roosting population of American bald eagles, as well as other threatened and endangered species that share ground with constant reclamation activities.

Graphic-Driven Research

Reclaiming the American West is supported by considerable amounts of data, which Berger makes accessible through effective visual display. Berger operates in the tradition of collecting base material. He interviewed the operators and the managers of the companies that deal with this. He spent some time at the Environmental Protection Agency finding out how they grade different sites in terms of toxicity and environmental damage. A thesis of the book isn’t only that you ameliorate these landscapes technically, by biochemistry or whatever, but that you deal with these landscapes through representation, to reshape people’s imagination. There’s a lot there that is at the same time analytical and technoscientific, and on the other hand representational, artistic, imaginative. It’s incredibly original and substantial. WM One of the things I really liked about it is how he uses graphics. Combining photographs and charts really makes everything come alive in terms of information. SL This is using the visual as a methodology. This is
Top: Juxtaposition of graphs and photos helps emphasize the impact of consumption patterns described in *Reclaiming the American West*.

Bottom: Mined and reclaimed landscapes are created by the larger cultural demands of population growth and suburbanization in the western states.

Opposite left: Graphic techniques are used both for analytical process and representational product.

Opposite right: Reclamation tests the limits of familiar land-shaping concepts like "angle of repose."
Edward R. Tufte, whose books have argued for visual clarity in the presentation of statistical information. In effect, the jury noted, Berger uses mapping, image-making, and graphic representation both as presentation tools and research methods. They praised this effort to create a new visual language, and noted that he had taken an analytical step beyond the mapping techniques of *Mississippi Flood* (winner of a 2001 EDRA/Places award for research).

Berger presents poetry about remaking land next to percentages and quantities, handling data in a way that advocates careful attention to qualitative experience. In doing so he constantly reminds his readers of what the data mean on the ground—its spatial implications and what it looks like in the landscape. Conversely, he also digs beneath the surface of many everyday images—presenting some astounding numbers behind the innocent image of a single-family housing development in Colorado, for example.

Many pages feature hybrids of graphed data, mapped data, and photographic images—three ways to understand the consequences of land manipulation. In arguing for his new graphical systems, Berger writes that section and plan drawings—customary devices of miners, conventional tools of reclaimers, and revered traditions of designers—are often inadequate to express the spatial and narrative possibilities of reclaimed land.

**A Long-Term Challenge**

According to Berger, mine reclamation—measured by spending and scale—will be one of the largest infrastructure undertakings in the history of the United States. And he urges landscape planners and designers in the American West to join the conversation about how to treat post-technological landscapes now, for challenges surrounding them will likely show up on their drawing boards for years to come.

Unfortunately, Berger says, the response from landscape architects to these issues has so far been virtually nonexistent. Miners, reclamation professionals, conservationists, and architects have all been enthusiastic in asking that he speak to them. But the very profession that should be best equipped to handle the challenge seems to be simply not paying attention. It continues to focus on formalism within site boundaries while missing the implications of larger forces that affect the site.

Thus, when Berger asked a room full of 200 landscape architects how they might contribute to the new work of reclaiming mined landscapes, the room was sadly silent, until one person responded that it would be interesting to have the opportunity to “make cool landforms.”

In *Reclaiming the American West* Berger questions the one-prescription approach to reclamation, and he encourages others to do the same. In doing so, he argues for the multiple possibilities of place. Just who will provide the vision for these new places, and how, remains in question. As a landscape architect and researcher, Berger has taken an intriguing first step. Other design professionals will do well to consider the prospectus presented in *Reclaiming the American West*.

— Andrea Urbiel Goldner

All images courtesy of Alan Berger.