

even slower in the drought-ridden northern climate and rocky soil. Residents have been witness to the fact that a residential subdivision or shopping centre can spring up in a former pasture in a matter of months. Success is rapidly degrading what has been called 'the last best place' in America.

Access and transportation

Montana cities and towns serve as commercial and service centres for very large but thinly populated 'market catchment' areas, which mitigates against establishing an effective mass transit system outside the urban core. Private automobiles, and the roads and parking they require, will therefore remain a significant urban feature for the foreseeable future. Existing rail lines, only one of which is currently used for passenger service in the region, could again be utilized to connect cities and towns, but it is likely that any future mass transit system within the city of Bozeman will rely primarily on buses rather than rails. In any event, there is no mass transit system of any kind in operation or even planned at the time of writing.

Loss of agriculture and habitat

Prime agricultural land in close proximity to the urban centre is being rapidly taken out of production in favor of regional shopping and residential subdivision (Epple, 2001). This land was one of the most agriculturally productive in the valley, and it provided expansive open spaces, often populated with cattle or sheep, as environmental 'breathers' and local viewsheds for Bozemanites. Ironically, increasing suburbanization is diminishing production of local agricultural products at the same time as demand for fresh local produce is increasing due to population growth and lifestyle preferences. A net loss of nearby agricultural land will require the conversion of additional land elsewhere to agricultural uses, and make it necessary to import and transport more food into the Gallatin Valley rather than progress toward greater regional self-sufficiency.

A 1990 report from the Ecology and Welfare Subcommittee of the environmental protection agencies (EPA's) Science Advisory Board ranked 'Habitat Alteration and Destruction' as an environmental risk well above 'Oil Spills', 'Groundwater Pollution' and 'Acid Runoff to Surface Waters'. In fact, it was

seen as a greater environmental risk than 'Herbicides and Pesticides', 'Airborne Toxins' and 'Acid Deposition' (EPA, 1990). A major reduction in the rate of destruction of natural habitat zones and corridors by development is essential to a sustainable future, as well as to a richer and more enjoyable one.

A partial solution

It is clear that current development trends are consuming the more intangible natural resources of the American West at an unsustainable rate: the wilderness, the productive agricultural land, the open landscape, the laid-back small town urbanity and sense of community. Current patterns of development require us to waste time, energy and non-renewable fossil fuel distributing goods and people. Growth is inevitable; this rapid destruction of our precious resource base is not. New development patterns and building typologies can provide an opportunity to sustain a reasonable amount of growth in existing communities, with no significant adverse effects on lifestyle. Limiting the bulk of future growth to existing settlement areas and reserving the intermediate open landscape for recreation, wildlife, agriculture and viewshed will add value to the entire community. A system which recognizes and embraces the interdependence of urban settlements and the surrounding countryside will ultimately be essential if we are to sustain our ecology and our lifestyle. The following proposals have been explored as a means of demonstrating to the citizens of Bozeman and the Gallatin Valley that appropriately designed new neighbourhoods and buildings in our existing cities and towns can absorb the predicted growth in our region with minimal change in character, landscape and lifestyle potential, while simultaneously improving the potential for continued sustainability of the new Western lifestyle.

Design proposals

Climatic influences

The climate of the Gallatin Valley and Bozeman is not as severe as locally perpetuated myth might suggest. There are relatively rare but admittedly severe Arctic air incursions, sometimes dropping temperatures to as low as -30°F for several days, but typical winter day temperatures range from the teens to the thirties. A typical winter day, although admittedly short at 45°N