

## Loss of Open Space

Between 1982 and 2001, approximately 34 million acres of open space (an area the size of Illinois) were lost to development – approximately 4 acres per minute or 6,000 acres a day. Specific to forests, over 10 million acres were converted to houses, buildings, lawns, and pavement between 1982 and 1997, and 26 million acres more are projected to be developed by 2030. The total loss of forests from 1982 to 2030 will be close to the size of Georgia.

### Fragmentation

The number of acres lost tells only part of the story. New housing and other developments disturb a larger area than just the footprint of the new structures.

- The Forests on the Edge project estimates that 44 million acres of private forest lands could experience sizeable increases in housing density by 2030 – giving us an idea of how much forest will be fragmented and divided into small parcels.

### Land development is outpacing population growth

Current patterns of growth in rural areas are exacerbating forest fragmentation – rural development tends to be on large lots and scattered across the landscape.

- As of 2000, rural residences occupied 7 times more land than urban and suburban residences (227 million acres vs. 31 million acres).
- For the period 2000-2025, researchers predict land development to increase by 79% while population is expected to increase by 24%.

### Impacts on forests and grasslands

- The loss and fragmentation of open space affects the ability of forests and grasslands to provide benefits, ecosystem services, and products to society – such as clean water, scenic beauty, places to recreate, wildlife and biodiversity, wood and food, and natural resource-based jobs.
- Smaller ownership parcels, especially when used as house lots, can be more difficult to manage for timber, forest health, and wildfire prevention.

### Development trends

- Land development is concentrated in rural areas – between 1994-1997, nearly 80 percent of new housing construction occurred outside of urban areas. Almost all of this land (94 percent) is in lots of 1 acre or larger.
- The Southeast has experienced the greatest loss of open space, with over 6 million acres developed between 1982 and 1997.
- Areas with recent gains in population include the Mountain West, Upper Great Lakes, Ozarks, and parts of the South and Northeast. Areas losing population include the Great Plains, Western Corn Belt, and Mississippi Delta.
- The fastest growing rural counties include those with National Forests and other natural amenities.
- More than one-third of all houses now fall within the wildland-urban interface, putting more people and property at risk to wildfire.
- Retirees, second home owners, telecommuters, and long-distance commuters are building homes in rural areas with open space amenities. In some of the Great Lakes counties, up to 80 percent of residences are second homes.

The loss of open space poses a threat to the health and sustainability of ecosystems, and reduces the ability of forests and grasslands to provide a multitude of public benefits, ecosystem services, and products.

- Open space includes public land, private forests, ranches, farms, and other undeveloped lands. Open space is found across the landscape in rural, suburban, and urban areas.

- Open space, both publicly and privately owned, provides many public benefits – including scenic beauty, clean water, places to recreate, wildlife habitat, and carbon sequestration. Open space also provides essential products like food, timber, and fiber, and supports land-based livelihoods.
- Loss of open space has three aspects: (1) *conversion* – replacement of natural areas with houses, buildings, lawns, and pavement, (2) *fragmentation* – the division of forests and grasslands into small isolated patches, and (3) *parcelization* – the subdivision of large acreages into smaller ownership parcels.
- Water quality and quantity are affected as development and fragmentation contribute to siltation, runoff, pollution, and reduced filtration.
- The loss and fragmentation of open space affects wildlife because of diminished habitat size, reduced forest interior habitat, isolation of existing populations, and elimination of connecting corridors linking relatively undisturbed forest areas. Fragmented areas can be too small to maintain viable breeding populations of some species, such as some migratory songbirds.
- Subdivision of land into small parcels can cut off traditional access points to public land and reduce the amount of private land available for hunting, fishing, hiking, and other recreation uses.
- Conversion of forests and grasslands reduces the land area available for production of food, wood, and fiber. Loss of agricultural and forestry enterprises reduces contributions to local economies, increases reliance on imports, and limits the availability of natural resource-based jobs in rural areas.
- Loss of open space reduces sequestration of airborne carbon by trees and plants, contributing to changes in climate.
- Loss of open space affects adjacent national forestland.
- Development next to the national forests and grasslands creates growth of the wildland-urban interface (WUI). Growth of the WUI increases costs of providing social and community services, including fire protection, to those areas.
- As low-density subdivisions spread through rural areas, national forests become more vulnerable to fuel buildup, introduction of invasive species, fire, and unmanaged recreation.
- Many Americans want to live near open spaces. Growth in rural areas is driven largely by retirees, second home owners, telecommuters, and long-distance commuters who want to live in beautiful places with open space amenities.
- Property values are often higher when adjacent to open space lands, especially if the open space is permanently protected.
- Landowners have many reasons for selling, subdividing, and developing their land including, but not limited to: (1) lack of estate planning; (2) federal and state tax bills; (3) gentrification of rural areas and corresponding rises in property values; and (4) family emergencies that require liquidation of assets to cover costs.
- An individual decision to sell or build can seem insignificant, but the cumulative effect over time and across the landscape can be very significant for the health and sustainability of forests and grasslands, and for the viability and identity of rural communities.
- The Forest Service is interested in partnering with others to conserve open spaces. We have expertise, resources, and programs that can help.

<http://www.fs.fed.us/projects/four-threats/>