

## INDEX

Note: *Italicized page numbers* followed by *b, f, or t* indicate boxes, figures, or tables. Green infrastructure is abbreviated as GI except when it is used as the key term in main headings.

- adaptive management, 203, 208–10  
aesthetics, in GI approach, 75–76  
agricultural lands (*see also* working lands): as component of GI, 76*f*;  
conversion of, 6, 8*f*; cost of service ratio for, 75, 261*b*; easements on, 157;  
prime, 21*n*3; tax incentives, 174  
air pollution mitigation, 69, 71  
alternative futures assessments, 262–64  
American Greenways Program, 34  
American Wildlands' Corridors of Life, 61*b*  
Anchorage, Alaska, 42–43  
Anne Arundel County, Maryland, 40–41, 173  
Appalachian Trail, 29  
ArborLinks Golf Course, Nebraska, 83*n*21, 255*b*  
Ashland, Wisconsin, 215  
Atlanta, Georgia, 69  
attributes of GI networks, 114–16, 118*t*, 121–23, 124–26*b*  
Augusta Riverwalk, Georgia, 73  
Au Sable State Forest, 245  
Austin, Texas, 185–86, 187*b*
- Back Bay Fens, Boston, 26  
Baltimore County, Maryland, 164*b*  
Bay County, Michigan, 244–50  
Bellevue, Washington, 267  
best management practices, 207*b*  
Big Cypress National Preserve, 10  
Big National Muddy Fish and Wildlife Refuge, 68*b*  
biodiversity, 9–11, 37, 58–61, 139, 204  
BioMap Program, Massachusetts, 260  
Biosolids Forestry Program, 191–92  
Blackfoot River, Montana, 158*b*  
bonds, 186–88, 272  
Boston, Massachusetts, 26, 71  
Boulder, Colorado, 156*b*, 216  
Bronx River Parkway, 28  
Broward County, Florida, 186  
brownfield redevelopment, 257–58  
Brundtland Commission, 33, 201  
buffers, 34*f*, 114, 166–67  
Cacapon and Lost Rivers Land Trust, 241–42*b*  
California Digital Conservation Atlas, 122*b*  
California Legacy Project, 122*b*  
Canaaan Valley Institute (CVI), 241*b*  
Catahoula National Wildlife Refuge, 62*b*  
Catoctin Land Trust, 19  
Catoctin Mountain Explorer, 19–20  
change detection analysis, 259–60  
Charles M. Russell National Wildlife Refuge, Montana, 199  
Charles River Basin, Massachusetts, 70  
charrettes, 235, 238–43, 247  
Chattahoochie Hill Country Alliance, 159–60  
Cherry Creek Greenprint, Douglas County, Colorado, 89  
Chesapeake Bay Agreement, 19–20, 206  
Chicago, Illinois, 38–39, 93  
chronology of GI, 24–25*b*  
citizen engagement: advisory committees, 89, 275–76; challenges with, 228–30; in ecosystem management, 204; education and, 220, 227–28; facilitating, 232–35, 244; in land stewardship, 215–17; in network design, 135–37; social capital and, 230–31; steering committees, 103–4, 107–8; support for GI and, 49–50, 225–26, 259–60; in visioning, 93, 242  
CITYGreen, 264  
Clean Air Act, 183–84*b*  
Clean Water Act, 184*b*  
Cleveland, Horace W. S., 26, 78–79  
cluster developments, 74, 165, 167*f*, 168–69*b*  
Coastcare, 216–17  
collaborations, 93 (*see also* partnerships; *specific collaboratives*)  
Colorado Open Lands, 48

Columbia River Basin, 204  
 commercial developments, 260, *261b*  
 communication plans, 227  
 community attitudes, changes in, 268–69  
 community benefits, 54, 78  
 community involvement. *see* citizen engagement  
 Community Open Space Partnership, Wisconsin, 46  
 community renewal projects, 257  
 community support for GI, 49–50, 152, 225–26, 259–64  
 community values, 75–76, 240  
 community visioning processes, 93–95, 100, 235–44  
 Community Viz, 264  
 comprehensive plans, 167–69, 252–53  
 computer models, 19–20, 112–13, 142–44  
 connections and connectivity (*see also* links): beyond the community, 48; to the land, 205; of network elements, 111–12, 123–30, 203; to other networks, 145, 277; as principle of GI, 37–39  
 conservation: community, *49b*; as critical public investment, *44b*; evolution of strategies, 34; GI as framework for, 41; history of, 25–36; implementation of, 149–50; as implementation tool, 171–72; integrated systems of, 50; multispecies plans, 101–5; priorities for, 37, 131–35; reserves, 31–32; science-based, 103–6; SITES computer model and, 144; strategic, 11–16, 35–36, 39, 46, 156  
 conservation banking, 171–72  
 conservation biology, 29–32  
 conservation corridors: American Wildlands' Corridors of Life, *61b*; greenbelts and, 13; Philip Lewis and, *31f*, 54n14; Mountains to Sound Greenway Trust and, 189–90; in natural areas inventories, *80f*; parameters and width, 128–29; in Portland metro area, 276–77; principles for, *131b*; in regional reserve system, *34f*; River Care and, 220; transportation plans and, 258–59; in Twin Cities, 81; WildLink and, 219  
 conservation developments, 14, *166f*, *168b*, 255–56 (*see also* cluster developments)  
 conservation easements, 157, *158b*, 160–62, 165  
 Conservation Fund, The, 19–20, 34, 50, *62b–63b*, 188–89, 218, 267  
 Conservation Reserve Enhancement Program (CREP), *182b*  
 Conservation Resource Alliance (CRA), 217–22  
 Conservation Security Program, *182b*  
 conventional developments, 74, 166  
 conventional zoning, 163  
 Cooke's Hope, Maryland, *256f*  
 Cooperative Endangered Species Conservation Fund, 178  
 Cooperrider, Allen, 110–12  
 coral reefs, 66–67  
 Corkscrew Regional Ecosystem Watershed Project (CREW), *38f*  
 Cost of Community Services (COCS) studies, 260–61, *261b*  
 cost of service ratio, 10, 75, 260–61, *261b*  
 Critical Lands Conservation Revolving Loan Fund, *161b*  
 Critter Control Project, Colorado, 258  
 cultural resources, 117, *119f*  
  
 data: categorization of, 123; collection of, 119, 121–22; mapping layers, 239–40; in SITES analysis, 144; visual display of, 30  
 decision-making processes, 92, 228, 266–67  
 deforestation, consequences of, 65–67  
 Delmarva Conservation Corridor, Maryland, 19–21  
 desert ecosystems, 100–108  
 design assessment, 131–32  
*Design with Nature* (McHarg), 30  
 development (*see also specific types of development*): footprint, 9; GI as framework for, 41; impact fees, 185; negative effects of, 9–10, 58; rights, 158; in the U.S., 5–8  
 Douglas County, Colorado, 89  
 downzoning, 163, *164b*  
 drinking water, 64–65, 71

ecological assessment, 80*f*, 131  
 ecological attributes of GI, 123, 124–25*b*  
 ecological benefits of GI, 63–64, 249*b*  
 ecological design, 115–16*b*  
 ecological networks, 33*b* (*see also* Florida Ecological Network)  
 ecological principles, 127–28  
 Ecological Society of America, 63  
 ecology, origins of, 29–30  
 economic benefits of GI, 70–75, 82*n*9, 249*b*  
 ecosystems: connection of components, 37; desert, 100–108; economic benefits of, 72–75; freshwater, 59–60; functions and values of, 114, 118*t*; health evaluation, 214; human impact on, 47*b*; management of, 203–6  
 ecotourism, 73, 116  
 education (*see also* public education and information): citizen engagement and, 215, 220, 227–28; of elected officials, 252–53; environmental, 192, 215–16, 275–76; of landowners, 162, 175–76; and support for GI, 259–60  
 elements of GI networks, 12–14  
 Emscher Park, Ruhr Valley, Germany, 257–58  
 endangered species, 58, 101  
 Endangered Species Act (ESA), 58, 60, 101–3, 184*b*  
 England's garden city movement, 26–27  
 enterprise funds, 181–84  
 environmental education, 192, 215–16, 275–76  
 environmental finance centers, 177, 179*b*  
 environmental legislation, first, 32–33  
 Environmental Quality Incentives Program (EQIP), 182*b*  
 environmental stewardship, 199–200  
 European Union, 33*b*, 71  
 Everglades National Park, 72, 199  
 exotic plants and disturbed habitat, 58  
  
 facilitators, 104, 108, 243*b*  
 farmland, 6, 8*f*, 21*n*3, 76*f* (*see also* agricultural lands; working lands)  
 Farmland Protection and Policy Act (FPPA), 183*b*  
 Farmview, Bucks County, Penn., 165  
  
 features of GI, desired, 113–19  
 federal environmental legislation, 182–84*b*  
 federal programs, 177–80, 252–53, 272  
 fees, as implementation tool, 180–86  
 fee-simple acquisition, 154–57  
 financial benefits. *see* economic benefits  
 financing tools, 172–77  
 fiscal impact analysis, 260  
 Fisher, Robert, 94*b*  
 fishing industry, tourism and, 72–73  
 flood mitigation, 65–69, 253  
 floodplains, 45, 68*b*, 155–56, 264  
 Florida: Everglades, 72, 199; GI initiative in, 52–53, 63–64, 113–21; hubs in model, 127; mitigation banking in, 172*b*; recreational/cultural network, 130  
 Florida Ecological Network, 5, 51–54, 133*f*, 137–38  
 Florida Greenways Commission, 50–51, 91*b*, 97–99*b*, 227–28  
 Florida Greenways Coordinating Council (FGCC), 49–51, 137  
 Florida Greenways System, 36*f*; ecological design goals and objectives, 115–16*b*; GIS and, 35; integrated systems of, 50; landscape attributes, 124–26*b*; mapping charrette, 239; partnerships in, 267; poster, 229*f*; public information and, 227–28  
 Fluvanna County, Virginia, 235–37  
 Forest Legacy Program, 177, 182*b*, 191  
 Forest Park, Portland, Oregon, 274  
 forests and forestlands (*see also* working lands): assessment of, in Maryland, 20; conversion rate of private, 6; economic benefits of, 82*n*9; environmental functions of, 63–69; interior, benefit to birds, 134*b*; PDRs and, 159*t*; revenue generation and service delivery costs, 75; tax incentives and, 174  
 Forman, Richard T. T., 34, 110  
 forums, 264  
 fragmentation of habitat, 9–10, 111–12, 171–72, 256  
 freshwater ecosystems, 59–60 (*see also* wetlands)

- funding (*see also individual projects*): for easements, 161–62; expansion of sources, 150; financing tools, 172–77; as implementation tool, 154*t*; for land acquisition, 154–56; as principle of GI, 43–45; private, 188–89, 191, 268
- Game Management* (Leopold), 29–30
- Garden State Greenways program, New Jersey, 40
- GIS (geographic information system): in analysis, 42*b*, 44*b*; in assessment, 16–17; Catoctin Mountain Explorer and, 19–20; in decision support systems, 241*b*; Florida Greenways System and, 35; mapping with, 105, 107*f*, 239–40; network design models, 52–54, 123–26
- glossary, 279–85
- golf courses, 83*n*21
- gray infrastructure, 43–45, 170*b*, 252–53, 254*b*, 257–59
- Greenbelt, Maryland, 29
- greenbelts, 13–14, 29
- Green City Data Project, Portland, Oregon, 276
- greenhouse gasses, 10, 62–63*b*
- green infrastructure (*see also principles of green infrastructure*): advantages of, 20–21; approach to, 3–4, 57–58, 197; benefits overview, 114, 118*t*, 249*b*; building support for, 259–64; chronology of, 24–25*b*; community benefits, 54, 78, 81–82, 264; definition, 1–2; ecological benefits, 45–46, 63–64, 134*b*; economic benefits, 70–75, 82*n*9; in Europe, 33*b*; foundations for, 188; health benefits, 75–78; key ideas in, 24–25*b*; methodology, 18–20; movement, 23; scale and scope, 14–16
- green infrastructure assessment, 16–17, 132
- green infrastructure management: agreements as implementation tool, 176–77; ecosystem management and, 203–6; holistic approach to, 209–10; mistakes in, 198–99; strategies for, 191, 197–98, 202–3, 211–15
- green infrastructure networks: attributes of, 114–16, 118*t*, 123, 124–26*b*; data collection and, 119, 121–22; design of, 109–13; elements of, 12–14; stakeholder involvement in, 87*f*
- green infrastructure sites, criteria for, 120*b*
- GreenPrint program, Maryland, 11–12, 18
- GreenSpace Alliance of Southeastern Pennsylvania, 44*b*
- green spaces, 1–2, 4, 72–73
- greenways, 13–14, 34, 35*b*, 253–54
- Greenways and Natural Areas Collaborative, Minnesota, 79
- growth, 5–8, 44*b*
- Guilford Land Trust, Connecticut, 155
- habitat blocks, 110–12
- Harris, Larry D., 34, 50
- hazard mitigation, 49*b*, 65–69, 71, 253
- Healing Waters Retreat, 241–42*b*
- health benefits of GI, 75–78
- Heart of the West Vision, 142
- Hillsborough River Greenways Task Force, Florida, 89
- historic resources, 117, 119*f*
- history of infrastructure, 4*t*, 24–25*b*
- history of land conservation, 25–36
- hubs, 13, 123, 126–27, 130
- implementation (*see also specific projects*): funding and financial considerations, 177–80; keys to success, 86*b*, 149; of management approaches, 209–10; strategies, 191; workgroups and, 241*b*
- implementation quilt, 150–51, 195*n*1
- implementation tools, 153–54*t*; bonds and loans, 186–88; conservation and mitigation banking, 171–72; conservation easements, 157–62; fee simple acquisition, 154–56; general categories, 152; management agreements and leases, 176–177; notification and recognition programs, 173; private funding sources, 188–89; regulatory, 163; state and federal funding, 177–80; taxes and fees, 180–86; tax incentives and tax credits, 174;

implementation tools (*continued*):  
     technical assistance, 174–75; zoning,  
     163–69  
 incentives, voluntary, 152, 153*t*, 170,  
     172–77, 183*b*  
 infrastructure, history of, 4*t*, 24–25*b*  
 Interior Columbia Basin Ecosystem  
     Management Project, 203–4  
 Intermodal Surface Transportation  
     Efficiency Act, 178  
 inventories of natural areas, 79–81, 212,  
     260  
 Ironwood Forest National Monument, 106  
 island biogeography theory, 30–31, 110  
  
 Jackson Hole, Wyoming, 242–43  
 Jeffco Open Space Foundation, Colorado,  
     188  
  
 Kinston/Lenoir County Green  
     Infrastructure Plan, North Carolina,  
     49*b*  
 Kissimmee River, 199  
 kudzu, 198  
  
 Lake Okeechobee, Florida, 199  
 land acquisition: in Boulder, Colorado,  
     156*b*; criteria for, in Austin, Texas,  
     187*b*; as implementation tool, 153–56;  
     Mountains to Sound Greenway, 191;  
     priorities in GI, 37  
 land allocation modeling, 264  
 Land and Water Conservation Fund, 177  
 Landcare, 216–17  
 land conservation (*see also* conservation):  
     ballot measures for, 226*t*; history of,  
     25–36; project implementation, 149–  
     50  
 Land Conservation Needs Assessment,  
     Virginia, 130  
 land development, rate of, 5–7  
 land management, 152, 199, 218–19 (*see*  
     *also* green infrastructure management)  
 Landowner Incentive Program, 183*b*  
 landowners, 46–48, 135–37, 175–76  
 landscape analysis methodology, 30  
 landscape attributes, categorization of,  
     123, 124–26*b*  
 landscape connectivity, 203  
 landscape ecology, 29–32, 39  
  
 landscape linkages, 13  
 Landscape Project, New Jersey, 40  
 landscape types, 119–23, 127  
 land stewardship, 199–201, 201*b*, 215–17  
 land trusts, 155  
 land-use planning, 36, 40–41, 103, 254*b*,  
     269–77  
 Larimer County, Colorado, 46  
 Las Cienegas National Conservation Area,  
     106  
 leadership groups (*see also* stakeholders):  
     challenges and keys to success, 87–89;  
     in community visioning process, 242;  
     and incorporation of planning, 252–  
     53; linking to related efforts, 100;  
     Mountains to Sound Greenway, 190;  
     in network design, 109; and planning  
     process, 92–99; recruitment of, 234*b*;  
     role in design process, 135–36; in  
     Sonoran Desert Conservation Plan,  
     103–4; structure and support of, 89–92  
 learning, in adaptive management, 208  
 leases, 176–77  
 Lewis, Philip, 30, 31*f*, 54*n*14  
 Life ECONet Project, 33*b*  
 limited site development, 166  
 Linking Colorado's Landscape, 146  
 links (*see also* conservation corridors):  
     critical, 61*b*; in Florida Ecological  
     Network, 133*f*; in GI networks, 13,  
     127–30; to related efforts, 100  
 loans, 176, 186–88  
 local government and GI, 169, 252–53,  
     268–69  
 Los Angeles County, California, 207*b*  
 Loudoun County, Virginia, 169  
 Lower Mississippi River Valley, 62*b*  
 Lyndhurst Foundation, The, 188  
  
 Madera, California, 157  
 Man and the Biosphere Program,  
     UNESCO, 110  
 mangrove forests, 66–67  
 Maple River corridor, Michigan, 219  
 mapping charrettes, 238–43, 247  
 maps and mapping, 30, 79, 219, 270  
 Martin County, Florida, 185  
 Maryland: Green Infrastructure  
     Assessment, 113–19, 121, 127–29,  
     133*t*, 136, 138–39;

Maryland (*continued*): Greenways Program, 16–21; mini-bonds and, 186; as model for local and regional efforts, 18–20; partnerships in, 210–11; real estate transfer taxes, 181; Smart Growth policy, 11–12; statewide greenways planning initiative, 35

Maryland Department of Natural Resources, 210–11

Massachusetts, 181

Massachusetts Community Preservation Initiative, 239

meeting facilitators, 104, 108, 243*b*

meetings, 39, 227, 233, 241*b*, 246 (*see also* forums; workshops)

mental health, GI and, 76–77

Metro Greenspaces program, Portland, Oregon: activities complementary to, 276–77; citizen involvement and education, 275–76; implementation phase, 274–75; Master Plan, 271–73; partnerships in, 270, 272–74

Metro Greenways Program, Twin Cities, Minnesota, 78–82

Middle Fork Snoqualmie River Valley, 191

Midland County, Michigan, 244–50

Milwaukee Metropolitan Sewerage District (MMSD), Wisconsin, 253

mineral rights, 195*n*2

Minneapolis, Minnesota, 26, 78–82

Minnesota Department of Natural Resources, 78–79

mission statements, 95

Mississippi River, 67–69, 199

Missouri River, 67–69

mitigation banking, 171–72

modeling processes, 137–39, 264

monitoring outcomes, 96, 197, 204, 209, 214

Montgomery County, Maryland, 42, 159

Mountains to Mesa, Colorado, 146

Mountains to Sound Greenway Trust, Washington, 189–94

multispecies conservation plans, 101–5

National Environmental Policy Act (NEPA), 32, 183*b*

National Park Service, 27–28, 218, 228, 241*b*, 245

natural areas: change detection analysis, 259–60; in Florida GI effort, 120–21; inventories of, 79–81, 212, 260; scarcity of, 5

natural disasters, 45, 66–67

natural resource attributes, 124–25*b*

Natural Resources Conservation Service (NRCS), 174–75

natural resources protection, 2, 25–36

natural systems: benefits of, 45–46; conservation developments and, 256; economic value of, 70–71; ecosystem management and, 204; and human intervention, 32; protection of, 37, 41–43, 58–59, 71, 132–34

Nature Conservancy, The, 112–13, 188, 238, 260

nature reserves, design principles for, 112*f*

network design: approaches to, 112–13, 142–44; assessment in, 131–33; goals for, 113–19, 132; guidance in, 110–12; as spatial vision of desired future, 109

network elements, 123–30

Neuse River Floodplain, North Carolina, 49*b*

New Jersey Pine Barrens, 159, 160*b*

New Mexico Highlands Vision, 142

nongovernmental organizations, 188–89

non-native landscape attributes, 125–26*b*

nonprofit land trusts, 188

nonregulatory approaches, 34

North American Wetlands Conservation Act, 183*b*

Northwest Michigan Greenways project, 218

Noss, Reed F.: and integrated systems, 50; regional reserve systems and, 34, 34*f*, 110–12, 142; on Sonoran Desert Conservation Plan (SDCP), 106, 108*n*7

notification and recognition programs, 173

Ocean City, New Jersey, 71, 181

Okefenokee Swamp, 60

"100-Acre Farm," 262*t*

open space ordinances, 163

open spaces: cluster developments and, *168b*; conservation developments and, *256*; cost of service ratio for, *261b*; environmental functions of, *63–69*; priorities for, *237f*; protection of, *156b, 277*; real estate values and, *74*

open space zoning, *164–66*

Orchard Creek Conservation Bank, *171*

Orton, Lyman, *264*

Orton Family Foundation, *258, 264*

Osceola National Forest, *60*

outcome-based goals, *212–13*

outdoor recreation, *77f, 116*

Parramore Greenprint Program, Orlando, Florida, *257*

Partners for Fish and Wildlife, *183b*

Partnership Land Use System (PLUS), *46–47*

partnerships, *265–68* (*see also individual projects*)

path analysis, *128, 142*

pathways, *74, 130*

Patuxent River Greenway, Maryland, *173*

Pere Marquette River, *221*

performance measures, *231*

performance zoning, *166*

Pima County, Arizona, *100–108*

Pinchot, Gifford, *27*

Pinelands National Reserve, *160b*

Pinhook Swamp, *60*

Pittsford, New York, *237–38*

plan adoption and incorporation, *251*

planned unit development zoning, *164*

planning processes: comprehensive plans, *167–69, 252–53*; in GI programs, *85*; incorporation of GI in, *252–56*; key elements of GI, *245*; land-use planning, *36, 40–41, 103*; leadership groups and, *92–99*; as opportunity, *39*; regional planning, *172, 269–77*; timing of, *41–43*; transportation plans, *253, 258–59*; urban planning, *30*

pollution mitigation, *69, 71*

population growth in U.S. cities, *6–7*

Portland, Oregon, *186, 257, 276–77* (*see also Metro Greenspaces Program, Portland, Oregon*)

Possingham, Hugh, *142*

Prairie Crossing, Illinois, *165, 166f*

President's Council on Sustainable Development, *35, 200, 201b*

principles of green infrastructure: application of, *52–53*; connectivity, *37–39*; long-term commitment, *48–50*; planning before development, *41–43*; public investment, *43–45*; science in, *40–41*; stakeholder participation, *46–48*

project boundaries, *202*

property rights, *46*

property taxes, *176, 181*

property values, *54, 74, 163–64*

public access issues, *161*

public education and information, *146, 215–16, 220, 227–28, 259–60, 275–76*

public investment, *43–45*

public involvement. *see* citizen engagement

publicity for public processes, *233, 244*

public workshops, *137, 239*

Puget Sound, Washington. *see* Mountains to Sound Greenway

purchase of development rights (PDRs), *157, 159t, 161–62*

Quality Growth Act of 1999, Utah, *161b*

Queen Anne's County, Maryland, *211*

quilt, metaphor of, *150–51*

rare and endangered species, *58, 101, 132*

real estate transfer taxes, *181*

real estate values, *54, 74, 163–64*

RECON, *105–6*

recreation and GI, *49b, 72–73, 77f, 116–17*

Red River National Wildlife Refuge, Louisiana, *63b*

reforestation and carbon sequestration, *62–63b*

regional planning, *172, 269–77*

regional reserve systems, *31–32, 34, 38–39, 110–12, 142*

regional task forces, *137*

regulatory approaches to implementation, *152, 162–77*

restoration projects: Back Bay Fens, Boston, *26*; in Europe, *258*; in GI, *197*; management agreements and, *177*;

- restoration projects (*continued*): Metro Greenspaces, Portland, 276; opportunity evaluation, 210–11; River Care, 220
- results monitoring. *see* monitoring outcomes
- retrofitting GI, 257
- review, in design process, 135–37
- rewilding, 139, 141*b*
- risk assessment in network design, 131, 133
- River Care, 220–22
- Rivers, Trails, and Conservation Assistance Program (RTCA), 218, 228, 241*b*, 245
- Riverside, Illinois, 26
- Rochester, New York, 209
- Rocky Mountain National Park, 140*f*, 215, 267
- Ruhr Valley, Germany, 257–58
  
- Sacramento, California, 69
- Safe Drinking Water Act, 184*b*
- Saginaw Bay Greenways Collaborative (SBGC): citizen engagement process, 246*f*, 247; evolution of planning approach, 254–55; results, 248–50; science- and community-based approach, 245–48; trails to greenways, 244–45
- sales taxes, 181
- Santa Monica Mountains, 258–59
- scales of GI, 14–16, 53
- school programs, 246–47
- science-based conservation, 40–41, 103–6, 127–28, 204, 231
- Science Technical Advisory Team, SDCP, 101–2, 104–6
- Seattle, Washington, 189–94, 269
- Shaw, William, 104–5
- Shelford, Victor, 27, 110
- Sherburne National Wildlife Refuge, Minnesota, 39
- Shiawassee National Wildlife Refuge, 245
- short-range planning, 252–53
- short-term yield *vs.* long-term sustainability, 200–201
- strategies for success, 86*b*, 87–89, 149, 232*b*
- Stuttgart, Germany, 69
  
- Silent Spring* (Carson), 32
- simulated annealing, 144
- site development, limited, 166
- sites, in GI network, 13*f*, 14
- SITES computer model, 112–13, 142–44
- Site Selection Module (SSM), 142
- smart conservation, 12, 269
- smart growth, 11–12
- Smart Growth Plan, Austin, Texas, 187*b*
- social benefits of GI, 249*b*
- social capital, 230–31
- Soil Conservation Service, 45
- Soldier Creek Watershed, Topeka, Kansas, 71
- Sonoran Desert Conservation Plan (SDCP): citizen engagement, 103–4, 105*f*; as multispecies conservation plan, 101–3; results, 106–8; science in, 41, 104–6
- Southeastern Ecological Framework, 42*b*
- Southern Rockies Ecosystem Project (SREP), 139–42, 141*b*, 143*f*, 144–46
- special assessment districts, 184–85
- SPEXAN 3.0 (Spatially Explicit Annealing), 142
- sprawl, 6, 9–11, 44*b*, 58, 277
- St. Lawrence River, 215
- St. Paul, Minnesota, 26, 78–82
- stakeholders (*see also* leadership groups): in alternative futures assessment, 263; consensus among, 92, 94*b*, 235; in design process, 135–36; GI projects and, 85–87, 87*f*, 88*b*, 225–26, 265; and natural area inventories, 212; and network design, 109; principles of GI and, 46–48; trust issues and, 231; in visioning workshops, 243*b*
- state governments, 177–80, 252–53, 268–69
- State Revolving Fund (SRF), 178
- stewardship, 199–201, 201*b*, 215–17
- stormwater management, 253, 257, 267
- strategic conservation, 11–16, 35–36, 46, 156
- Strategic Forest Lands Assessment,
  
- Sun Valley Watershed Stakeholders Group, 207*b*
- sustainability, 33, 35–36, 59*f*, 200–201

taxes and fees, 54, 176, 180–86  
 tax incentives and tax credits, 174  
 tax revenue from residential development, 260–61  
 TEA-21 grants, 178  
 technical advisory committees, 101–2, 104–6, 190, 231, 245–46  
 technical assistance, 174–75  
 technology, human attitudes about, 68*b*  
 timeline: rise of GI, 24–25*b*  
 Topeka, Kansas, 71, 163, 181–84  
 tourism, 54, 72–73, 82, 116  
 traditional development, compared to cluster development, 167*f*, 168–69*b*  
 traffic problems, 11, 58  
 Transagency Resources for Economic and Environmental Sustainability (T.R.E.E.S.), 207*b*  
 TransCanada Highway, 258  
 transfer of development rights (TDRs), 159–62  
 transportation plans, 253, 258–59  
 Traverse City region, Michigan, 217–18  
 trees: and air pollution mitigation, 69, 71; ecological benefits of, 63–64; economic benefits of, 71, 82*n*9; and flood mitigation, 66*b*  
 T.R.E.E.S. project, 207–8*b*  
 Trust for Public Land (TPL), 189  
 Twin Cities, Minnesota, 78–82

United Nations' World Commission on Environment and Development, 33  
 University of Florida, 42*b*, 51–52  
 Upper Eastern Shore Tributary Team, 211  
 Upper San Pedro River Basin, 263  
 urban forests, benefits of, 69–70  
 urban growth boundaries, 170*b*, 269  
 urban land, rate of conversion, 5–6  
 Urban-Rural Demarcation Line (URDL), Baltimore County, Maryland, 164*b*  
 U.S. Environmental Protection Agency (EPA), 32, 42*b*, 177, 179*b*  
 U.S. Fish and Wildlife Service (USFWS), 63*b*, 270, 272–73  
 Utah Open Lands Committee, 161*b*

viewsheds, 116–17  
 Virginia Beach, Virginia, 157

Virginia Land Conservation Needs Assessment, 130  
 vision, 92–95, 236*b* (*see also* community visioning processes)  
 voluntary programs, 152, 153*t*, 170, 172–77, 183*b*, 219  
 volunteers, 173, 225–26, 231–33, 234*b*, 276 (*see also* leadership groups; stakeholders)

Washington, D. C., 69  
 Washington College, Maryland, 211  
 Washington Department of Transportation, 193  
 Watchman, Laura Hood, 106, 108*n*7  
 water, potable, 64–65, 71  
 water resource attributes, 114–16  
 watersheds, 117*f*, 203, 206, 208–10, 254*b*  
 Waynesboro, Virginia, 178  
 West Manchester Township, Pennsylvania, 165–66  
 West Michigan vision statement, 93  
 West Virginia, 72–73, 181  
 wetland mitigation banking, 171  
 wetlands, 59–60, 63–69, 72–73  
 Wilderness Society, 28  
 Wildlands, Inc., 171  
 Wildlands Project, 61*b*, 113, 139  
 wildlife conservation programs, 58  
 Wildlife Conservation Society, 61*b*  
 wildlife crossings, 258–59 (*see also* conservation corridors)  
 wildlife ecology, 29–30  
 wildlife habitats: change detection analysis, 259–60; conservation developments and, 255–56; gray infrastructure and fragmentation, 258–59; limitations of National Park System for, 27–28; maintaining health and diversity of, 37; in network design assessment, 132; in Portland metro area, 274*b*, 276–77; protection of, 58–59; SDCP and, 105*f*; in Southern Rockies Ecoregion, 139; sprawl and lack of diversity in, 9–10; urban forests and, 69  
 wildlife-related recreation, 72–73  
 WildLink, 218–22  
 Willamette Valley Alternative Futures project, 264

Wilson, Edward O., 30–31, *61b*  
Wisconsin Community Open Space  
Partnership, 46, 232–33  
working lands: as component of GI, *76f*;  
in GI assessment, Maryland, 114;  
Mountains to Sound Greenway Trust  
and, 193; service delivery costs of, 75;  
TDRs and, *160b*; value to GI network,  
116  
workshops, 136–37, 235, 239

World Commission on Environment and  
Development (Brundtland  
Commission), 33, 201  
Wyoming Department of Transportation,  
259  
Wyoming Township, Minnesota, 240–42

Yellowstone to Yukon Conservation  
Initiative (Y2Y), 95, 267

zoning, 163–70