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Economic Contributions of the Green Industry in the United States, 2007

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Foreword

This *Southern Cooperative Series* bulletin is being electronically published under the auspices of Southern Association of Agricultural Experiment Directors and the *Green Industry Research Consortium*, a multi-state research project (S-1051) sponsored by the U.S. Department of Agriculture, National Institute for Food and Agriculture (USDA-NIFA). The consortium is comprised of horticulturists and agricultural economists from land-grant universities who jointly work on issues of importance to the U.S. environmental horticulture or "Green" industry. A full listing of consortium participants and other resources are available on the project website (http://www.greenindustryresearch.org). The Administrative Advisor to the project is Dr. Craig Nessler (Texas A&M University), and the USDA-NIFA Representative is Dr. Henry Bahn. The lead agricultural experiment stations for this study were the University of Florida and Texas A&M University.

Principal objectives of the Green Industry Research Consortium currently are to:

1. Investigate sustainable practices in ornamental crop production systems.
2. Evaluate national and regional economic contributions of the U.S. Green industry.
3. Evaluate consumer preferences for environmental plants and their contribution to health and well-being.
4. Investigate labor management practices and mechanization in the nursery and greenhouse industry.

Acknowledgements

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Executive Summary

The environmental horticulture industry, also known as the "Green Industry," is comprised of a variety of businesses involved in the production, distribution and services associated with ornamental plants, landscape and garden supplies and equipment. Segments of the industry include wholesale nursery, greenhouse and sod growers, landscape architects, contractors and maintenance firms, marketing intermediaries such as brokers, horticultural distribution centers, and re-wholesalers, retail garden centers, home centers and mass merchandisers with lawn and garden departments, and a variety of other retail establishments selling plants and horticultural goods. In addition to these commercial sectors, many state and local governments have significant urban forestry operations for management of parks, botanic gardens, and right-of-ways that are an integral segment of community infrastructure.

The nursery and greenhouse sector has experienced considerable growth in the last two decades, albeit slowing somewhat in recent years. The landscape design, construction, and maintenance sector has also expanded due to strong economic conditions and robust building activity. Retail sales of horticultural goods have increased for both independent and chain-store type retailers, with considerable consolidation occurring due to the increased presence of home centers and mass merchants in the lawn and garden marketplace. The outlook for the Green Industry is promising, yet there are challenges resulting from increasing competitive pressures.

In view of its importance, numerous studies have been conducted to document the Green Industry's economic impacts in individual states or regions. The present study updates previous research that evaluated economic impacts of the Green Industry in the United States for 2002 (Hall, Hodges and Haydu, 2005, 2006). National estimates of economic impacts were derived from a variety of information sources, including national and state-level industry statistics from the 2007 U.S. Economic Census (Census Bureau, 2010), other federal government reports, and primary surveys by horticultural economics researchers. Economic impacts for each state were computed using multipliers from the *RIMSII* Input-output analysis system (USDOC/BEA, 2007), to estimate the indirect effects of industry purchases and induced effects of employee household spending arising from new final demand.

Total economic contributions for the United States Green Industry in 2007, including regional economic multiplier effects, were estimated at $175.26 Billion in output (revenue), employment of 1.95 Million fulltime and part-time jobs, labor earnings of $53.16 Billion, and $107.16 Billion in value added (Table ES-1). Total value added impacts represented 0.76 percent of U.S. Gross Domestic Product in 2007. For the *Production and Manufacturing* Group, including *Nursery and Greenhouse Production* and *Lawn and Garden Equipment Manufacturing* sectors, total output impacts were $52.57 Billion, employment impacts were 469 thousand jobs, earnings impacts were $13.14 Billion, and value added impacts were $32.13 Billion. For the *Horticultural Services* Group, *Landscape Services* and *Landscape Architectural Services* sectors, total output impacts were $92.83 Billion, employment impacts were 1.12 Million jobs, earnings impacts were $30.15 Billion, and value added impacts were $54.52 Billion. For the *Wholesale and Retail Trade* Group, total output impacts were $29.86 Billion, employment impacts were 358 thousand jobs, earnings impacts were $9.87 Billion, and value added impacts were $20.51 Billion. The largest individual industry sectors in terms of employment and value added impacts were *Landscaping Services* (1,075,343 jobs, $50.28 Billion), *Nursery and Greenhouse Production* (436,462 jobs, $27.14 Billion), and *Building Materials and Garden Supplies Stores* (190,839 jobs, $9.71 Billion). Other industry sectors with employment impacts exceeding 10,000 jobs were *Miscellaneous Store Retailers* (59,829 jobs), *Landscape Architectural Services* (48,085 jobs), *Lawn and Garden Equipment Manufacturing* (32,230 jobs), *General Merchandise Stores* (39,433 jobs), *Merchant Wholesalers of Durable Goods* (19,218 jobs), *Merchant Wholesalers of Nondurable Goods* (15,732 jobs), *Food and Beverage Stores* (14,074 jobs), and *Non-store Retailers* (12,170 jobs), as shown in Figure ES-1.

Employment and value added contributions by the Green Industry in 2007 are summarized by state and region and industry group in Table ES-2. The largest regions in terms of total employment contributions were the Pacific (358,577 jobs), Southeast (351,489 jobs) and Midwest (335,252 jobs), followed by the Appalachian region (208,391 jobs), Mountain (159,440 jobs), Southcentral (154,270 jobs) and Great Plains (30,038 jobs). The top-ten individual states in terms of employment contributions were California (257,885 jobs), Florida (188,437 jobs), Texas (82,113 jobs), North Carolina (81,770 jobs), Ohio (79,707 jobs), Pennsylvania (75,604 jobs), New Jersey (67,993 jobs), Illinois (67,382 jobs), Georgia (66,042 jobs), and Virginia (58,677 jobs) as shown in Figure ES-2. Generally, output and value added contributions in regions and states followed the same ordering as employment. Total value added impacts as a share of Gross State Product ranged from over 1.60 percent to less than 0.04 percent.

Between 2002 and 2007, total horticultural sales increased by 3.5 percent and total output impacts increased by 29.2 percent, or an average annual rate of 5.8 percent over the five year period. The *Production and Manufacturing* industry group and *Horticultural Services* group had substantially increased output impacts of 36.8 percent and 44.6 percent, respectively, while the *Wholesale and Retail Trade* group declined by 9.7 percent during this period. Value Added impacts increased by 22.2 percent, however, labor income impacts declined by 11.2 percent. Direct employment also declined by 2.7 percent but total employment impacts increased by 20.4 percent.

Figure ES-1. Employment contributions of U.S. Green industry sectors, 2007

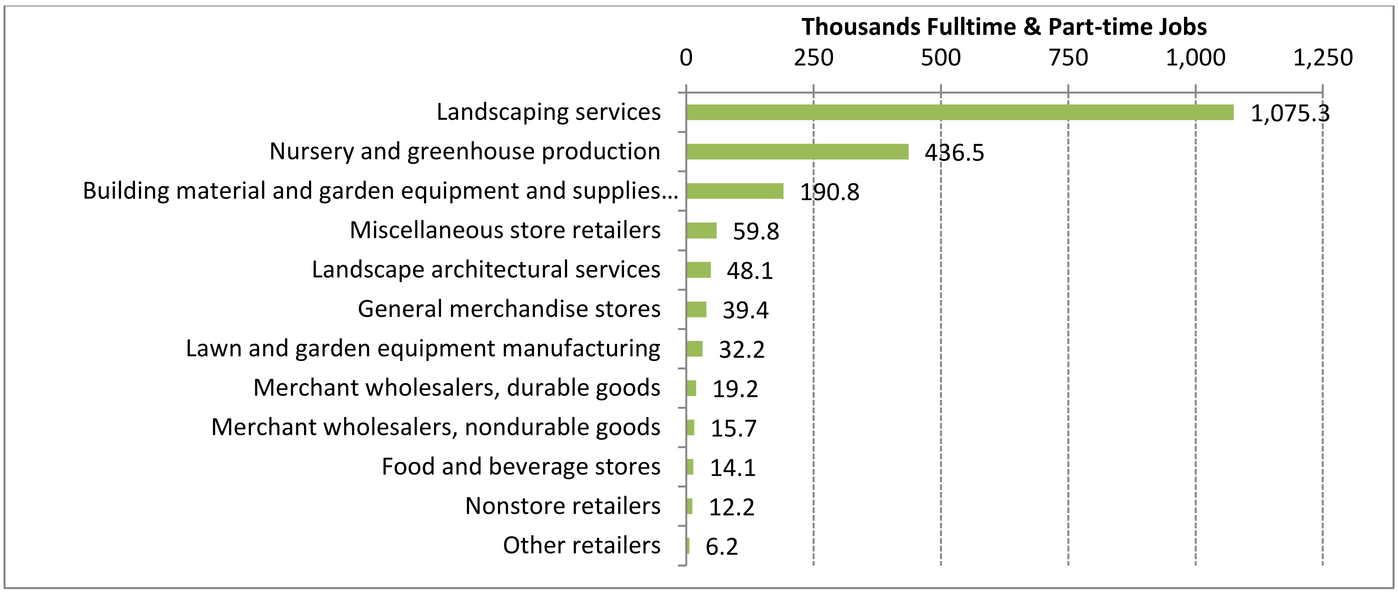


Figure ES-2. Employment contributions of the Green industry in U.S. states, 2007

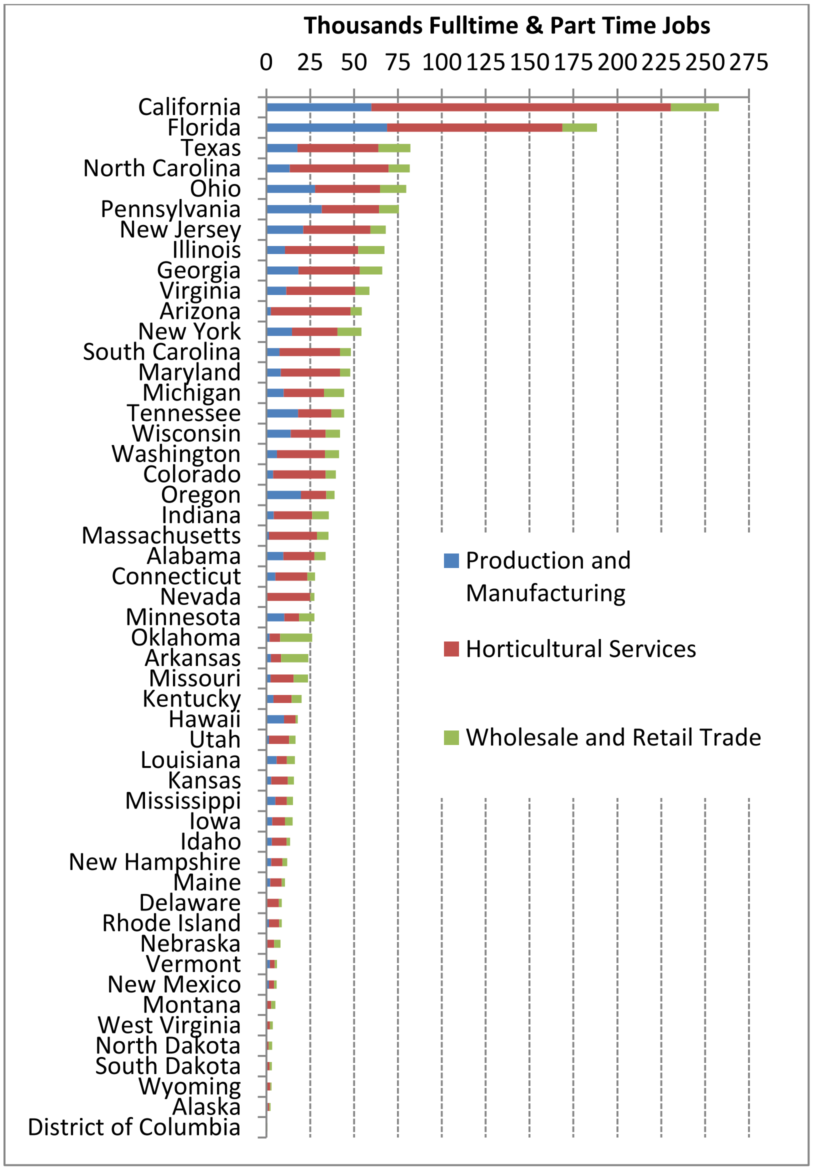


Table ES-1. Summary of economic contributions of U.S. Green industry sectors, 2007

Industry Group / Sector (NAICS)	Number Establish-ments	Sales Revenues	Direct Output	Total Output Impact	Payroll	Total Earnings Impact	Total Value Added Impact	Direct Employ-ment	Total Employ-ment Impact
		Million Dollars						*Fulltime & Part-time Jobs*	
Production and Manufacturing	**19,917**	**35,386**	**35,386**	**52,572**	**8,773**	**13,145**	**32,128**	**277,736**	**468,692**
Nursery and greenhouse production (1114)	19,803	27,139	27,139	40,941	8,268	11,986	27,099	262,941	436,462
Lawn and garden equipment manufacturing (333112)	114	8,247	8,247	11,632	506	1,160	5,028	14,795	32,230
Horticultural Services	**99,930**	**58,276**	**58,276**	**92,830**	**19,129**	**30,151**	**54,521**	**631,511**	**1,123,428**
Landscaping services (56173)	93,687	53,910	53,910	86,661	17,389	27,809	50,283	596,896	1,075,343
Landscape architectural services (54132)	6,243	4,365	4,365	6,169	1,740	2,342	4,238	34,615	48,085
Wholesale and Retail Trade	**1,279,848**	**82,452**	**23,740**	**29,856**	**7,974**	**9,866**	**20,511**	**292,962**	**357,515**
Building material and garden equipment and supplies stores (444)	91,070	39,004	11,896	14,121	4,609	5,300	9,706	163,458	190,839
Miscellaneous store retailers (453)	121,911	7,045	3,071	4,047	874	1,181	2,750	47,175	59,829
Merchant wholesalers, durable goods (423)	254,975	8,681	2,087	2,985	670	945	2,064	12,355	19,218
General merchandise stores (452)	45,855	7,489	1,955	2,220	711	794	1,532	36,366	39,433
Merchant wholesalers, nondurable goods (424)	134,614	11,568	1,921	2,852	470	752	1,975	9,570	15,732
Non-store retailers (454)	59,375	3,368	1,455	1,878	279	409	1,278	7,408	12,170
Food and beverage stores (445)	146,084	2,451	706	823	252	288	567	12,785	14,074
Wholesale electronic markets, agents and brokers (425)	45,394	2,129	431	658	46	116	453	1,030	2,765
Furniture and home furnishings stores (442)	65,144	218	97	114	30	35	78	1,128	1,325
Gasoline stations (447)	118,756	292	57	81	10	17	54	612	920
Electronics and appliance stores (443)	50,803	90	26	30	9	11	21	420	467
Health and personal care stores (446)	88,452	77	23	28	10	11	19	350	403
Sporting goods, hobby, book, and music stores (451)	57,415	40	15	18	5	6	12	305	339
Total All Industry Groups	**1,399,695**	**176,113**	**117,402**	**175,258**	**35,876**	**53,162**	**107,160**	**1,202,210**	**1,949,635**

Values for wholesale and retail trade sectors reflect share of sales, employment and payroll for horticulture product lines, and gross margin on sales for output. Total impact estimates include regional economic multiplier effects.

Sources: Census Bureau: 2007 Economic Census: revenues and employment for manufacturing, trade and service sectors, and product line sales; National Nursery Survey: nursery and greenhouse revenues, employment and out-of-state shipments (2008); Census Bureau: Wholesale and Retail Trade benchmark reports (2005): gross margin on sales; IMPLAN: state data on out-of-state shipments or exports (2001); BEA: RIMSII regional economic multipliers (2007).

Table ES-2. Employment and value added contributions of Green industry groups in U.S. regions and states, 2007

Region / State	Employment (Fulltime & Part-time Jobs)				Value Added (Million Dollars)			
	Production and Manufac-turing	Horticultural Services	Wholesale and Retail Trade	Total All Industry Groups	Production and Manufac-turing	Horticultural Services	Wholesale and Retail Trade	Total All Industry Groups
Appalachian	**47,043**	**126,900**	**34,448**	**208,391**	**3,262.6**	**5,279.7**	**1,917.8**	**10,460.0**
Kentucky	3,960	10,524	5,597	20,081	350.1	439.8	280.4	1,070.2
North Carolina	13,366	56,339	12,066	81,770	569.8	2,265.0	746.0	3,580.8
Tennessee	18,051	19,067	7,157	44,274	1,484.0	849.6	400.6	2,734.2
Virginia	11,293	39,344	8,039	58,677	850.3	1,663.7	416.0	2,930.0
West Virginia	373	1,627	1,589	3,589	8.5	61.6	74.7	144.9
Great Plains	**4,234**	**15,372**	**10,432**	**30,038**	**243.4**	**696.9**	**554.4**	**1,494.8**
Kansas	2,672	9,517	3,495	15,685	75.3	436.8	173.1	685.2
Nebraska	658	3,698	3,630	7,985	135.1	166.7	191.5	493.2
North Dakota	260	1,004	2,010	3,274	2.4	44.0	112.9	159.4
South Dakota	644	1,153	1,297	3,094	30.6	49.5	76.9	156.9
Midwest	**82,204**	**172,548**	**80,500**	**335,252**	**5,471.3**	**9,048.9**	**4,478.3**	**18,998.6**
Illinois	10,536	41,905	14,941	67,382	1,461.2	2,538.3	1,001.9	5,001.3
Indiana	4,129	22,034	9,497	35,660	228.1	1,022.7	481.6	1,732.4
Iowa	3,231	7,307	4,488	15,027	278.9	315.7	233.9	828.5
Michigan	9,950	22,880	11,543	44,373	721.1	1,288.7	572.0	2,581.8
Minnesota	10,163	8,536	8,613	27,311	294.4	551.6	480.5	1,326.5
Missouri	2,432	13,168	8,213	23,813	232.4	608.1	429.5	1,270.1
Ohio	27,789	36,918	14,999	79,707	1,462.6	1,771.9	873.5	4,108.0
Wisconsin	13,974	19,800	8,206	41,979	792.6	951.9	405.5	2,150.0
Mountain	**12,116**	**124,043**	**23,281**	**159,440**	**672.5**	**5,459.1**	**1,277.6**	**7,409.2**
Arizona	2,605	45,448	6,265	54,318	308.2	1,845.5	337.0	2,490.7
Colorado	3,855	29,887	5,930	39,672	167.4	1,560.8	335.2	2,063.4
Idaho	3,045	8,402	2,079	13,526	87.5	343.9	101.9	533.3
Montana	235	2,448	2,412	5,096	55.9	111.0	117.8	284.6
Nevada	388	24,690	2,242	27,320	18.6	1,003.0	136.8	1,158.4
Utah	1,521	11,475	3,554	16,550	27.1	517.8	202.4	747.4
Wyoming	468	1,692	799	2,958	7.8	77.2	46.3	131.3
Northeast	**90,973**	**204,664**	**59,831**	**355,469**	**5,407.2**	**11,944.3**	**3,610.3**	**20,961.7**
Connecticut	5,128	18,266	4,413	27,807	312.4	1,033.3	277.0	1,622.7
Delaware	301	6,811	1,664	8,776	11.0	319.1	110.5	440.6
District of Columbia		180	419		599	16.4	19.8	36.2
Maine	2,193	6,667	1,795	10,655	67.5	291.3	93.7	452.5
Maryland	8,230	33,746	5,791	47,768	367.9	1,627.2	335.8	2,330.9
Massachusetts	1,551	27,344	6,545	35,440	78.8	1,802.4	370.0	2,251.1
New Hampshire	2,793	6,289	2,844	11,926	422.6	325.8	179.4	927.8
New Jersey	21,044	38,253	8,696	67,993	1,263.6	2,304.0	552.2	4,119.8
New York	14,631	25,966	13,533	54,131	954.5	1,923.7	927.2	3,805.5
Pennsylvania	31,560	32,637	11,407	75,604	1,736.1	1,864.1	584.6	4,184.8
Rhode Island	1,452	5,872	1,390	8,713	52.9	319.8	82.4	455.0
Vermont	2,089	2,632	1,335	6,057	139.8	117.2	77.8	334.9
Pacific	**96,332**	**219,823**	**42,422**	**358,577**	**8,048.1**	**10,546.2**	**2,570.3**	**21,164.6**
Alaska	781	873	825	2,479	116.7	55.9	47.0	219.7
California	59,817	170,643	27,425	257,885	5,866.1	8,310.3	1,659.0	15,835.5
Hawaii	10,052	6,582	1,340	17,974	623.8	283.5	72.5	979.8
Oregon	19,730	14,342	4,723	38,794	936.5	606.7	289.3	1,832.5
Washington	5,951	27,383	8,109	41,443	505.0	1,289.8	502.4	2,297.2
Southcentral	**29,625**	**66,455**	**58,190**	**154,270**	**2,783.2**	**3,070.9**	**3,143.7**	**8,997.8**
Arkansas	2,658	5,763	15,577	23,999	260.8	193.4	801.4	1,255.6
Louisiana	5,866	5,740	4,674	16,280	760.3	247.8	255.9	1,264.1
New Mexico	1,492	2,908	1,394	5,794	297.7	133.6	69.6	500.9
Oklahoma	1,898	5,958	18,227	26,084	73.5	237.8	958.4	1,269.6
Texas	17,710	46,087	18,316	82,113	1,390.8	2,258.4	1,058.4	4,707.5
Southeast	**109,455**	**193,623**	**48,411**	**351,489**	**6,525.8**	**8,474.9**	**2,958.3**	**17,959.0**
Alabama	9,752	17,666	6,257	33,675	609.3	669.4	324.3	1,602.9
Florida	68,783	99,862	19,792	188,437	3,861.1	4,562.2	1,313.4	9,736.7
Georgia	18,305	35,004	12,732	66,042	1,316.9	1,703.1	791.4	3,811.4
Mississippi	5,058	6,613	3,525	15,197	273.0	232.0	184.3	689.2
South Carolina	7,557	34,478	6,104	48,139	465.6	1,308.3	345.0	2,118.8
Total All Regions	**471,981**	**1,123,428**	**357,515**	**1,952,925**	**32,414.0**	**54,521.0**	**20,510.7**	**107,445.8**

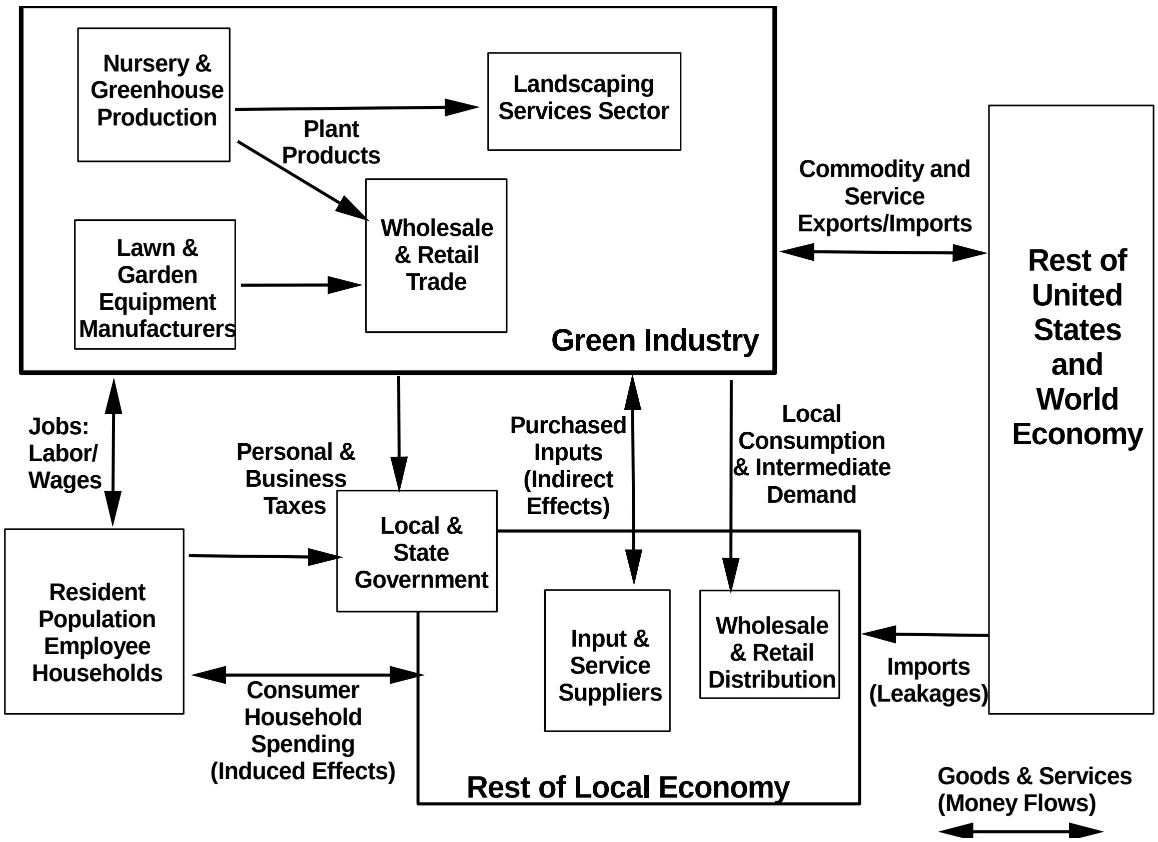
Values for wholesale and retail trade sectors reflect share of sales, employment and payroll for horticulture product lines. Estimates include regional economic multiplier effects.

1. Background and Introduction

Structure of the Green Industry

The U.S. environmental horticulture industry, also known as the *Green Industry*, is comprised of wholesale nursery, greenhouse, and turfgrass sod growers; landscape service firms such as architects, designers/builders, contractors, and maintenance firms; retail firms such as garden centers, home centers and mass merchandisers with lawn and garden departments, and marketing intermediaries such as brokers and horticultural distribution centers (re-wholesalers). There is also a substantial allied trade industry that supplies various production inputs to the industry. The structure of the Green industry is illustrated in Figure 1-1.

Figure 1-1. Market structure and economic linkages of the Green industry



Input Suppliers, often referred to as allied trade firms, are businesses that provide various inputs for ornamental plant production, landscape services, and retail sales. These inputs commonly include agrichemicals, fertilizers, containers, packaging, farm machinery, tools and equipment, propagative materials, and consulting or financial services. The commodities originate from extractive and manufacturing industries such as mining, petroleum, and forestry.

Plant Producers are firms engaged in producing Green Industry products include growers of floriculture crops, nursery crops, and turfgrass sod. *Floriculture crops* are generally herbaceous plants including bedding plants, potted flowering plants, foliage plants, cut cultivated greens, and cut flowers. Bedding and garden plants consist of young flowering plants (annuals and perennials) and vegetable plants grown in flats, trays, pots, or hanging baskets, usually inside a controlled greenhouse environment, and sold largely for gardens and landscaping. Potted flowering plants are usually sold in pots for indoor use. The major potted flowering plants are poinsettias, orchids, florist chrysanthemums, and finished florist azaleas. Foliage plants are also sold in pots and hanging baskets for indoor and patio use, including larger specimens for office, hotel, and restaurant interiors. Cut flowers are usually sold in bunches or as bouquets with cut foliage. The most popular cut flowers are roses, carnations, gladioli, and chrysanthemums. Leatherleaf ferns are the leading cut foliage. Combining cut flowers and cut greens in bouquets or other flower arrangements is a value-added retail option.

The main market outlets for floriculture crops are florists, garden centers, mass merchandisers, supermarkets, chain stores, discount stores, home improvement centers, hardware stores, landscape contractors, and re-wholesalers. Other retail outlets are farmers markets, flea markets, and street vendors. Since cut flowers are perishable and live floral crops are sensitive to variations in temperature, they usually require cool transportation and storage conditions to preserve and prolong their quality before final sale. The demand for floral crops, especially cut flowers, is highly seasonal. Sales are normally highest from February through May and in the fall. Sales of cut flowers peak during holidays such as Valentine's Day and Mother's Day. Poinsettia plants are sold mostly from Thanksgiving to Christmas. Cut flowers and foliage plants, however, are increasingly popular throughout the year as indoor decorations for the home and workplace.

Nursery crops are woody or perennial plants usually grown in containers or in-ground, including ornamental trees and shrubs, fruit and nut trees (for noncommercial use), vines, and ground covers primarily used for landscaping. Trees and shrubs are classified as deciduous or evergreen. Deciduous includes shade, flowering, ornamental, fruit, and nut trees and shrubs, while evergreens include broadleaf and coniferous trees and Christmas trees. The location of nursery production is determined largely by soil, climate, availability of water, accessibility and distance to markets, and cost of land. Each plant species has a hardiness zone that sets the northern geographic latitude for in-ground growth. Trees and shrubs start out as "liners", undeveloped, but rooted, trees and plants in pots or trays. As seedlings, they are typically protected from intense sunlight or severe weather by shade or temporary cover before transplantation into larger containers or the field for further growth. Sales can occur at any stage depending on the plants' commercial purpose. Since nursery crops are usually grown in the field or in containers often without covered protection, the choice of crops is based on an area's natural vegetative species or the crop's ability to tolerate local climatic conditions. Thus, sales of most nursery crops, except Christmas trees, are more local or regional than floriculture crops, which are less costly to ship to farther markets. Markets for nursery crops include homeowners, developers, public utilities, golf courses, resorts, commercial parks, malls, and government agencies in charge of public parks, and street and highway vegetation. Demand for nursery crops (except Christmas trees) tends to coincide with normal planting seasons in the spring and fall.

Sod farms are specialized nurseries that produce turfgrass varieties that are hardy for their particular region. Once sod leaves the nursery/farm, it usually passes through one or more marketing channels and is eventually used for new residential or commercial developments, for re-landscaping existing developments, for sports turf facilities such as athletic fields and golf courses, or for businesses, schools and roadside uses. Although the customer generally decides the type of sod to purchase, the installer also plays an important role. Both the landscape contractor and sod installer often make the decision from whom to buy and may recommend to the property owner the type of sod to plant.

Wholesale Distributors are an integral part of the Green Industry supply chain. Intermediaries such as brokers and importers facilitate the transactions of domestic and international growers and retailers. Re-wholesalers, often referred to as horticultural distribution centers (HDCs) or landscape distribution centers, are also market facilitators that offer regionally specific mixes of landscape products for immediate pickup or delivery to landscape professionals and have emerged throughout the United States in a variety of forms. There are self-contained HDCs and HDCs that serve as independent profit centers within vertically-integrated grower, landscape contracting, and retail garden center operations. Landscape distribution traces its development back to the produce dealers of the 1940s and 1950s. Following World War II, a sustained building boom fueled an increasing demand for products and services that landscape professionals, retail garden centers, and other horticultural businesses attempted to fulfill. At the same time, rising land values pushed growers farther away from spreading urban and suburban areas. The resulting longer supply lines created difficulties in meeting the expanding needs of the horticulture industry, and spawned development of this new distribution network from the nursery grower to the horticultural customer. The long-distance distribution system infrastructure for plants is still being refined in many parts of the country. An efficient trucking system extends from Florida all along the East coast, featuring regular routes run by independent trucking companies. Some large producers have developed in-house, large-volume delivery systems to service big-box retailers. But cross-country shipments are still difficult because of the long time that plants are held in trucks, lack of back haul opportunities, and the excessive handling that takes place for small orders. Air transportation is being used more frequently, but only for high-value plants such as cut flowers.

Horticultural Service Firms provide landscape design (architectural), installation (construction), and maintenance services. These firms serve a variety of clientele, including residential homeowners, commercial businesses, and municipalities. Some firms in the industry offer a combination of design, installation, and maintenance services (e.g., design-build firms) to appeal to a larger clientele base, however, many businesses gear their services towards specific markets. For instance, some specialize in seeding and fertilizer application in areas along newly constructed highways and installing erosion control devices. Such work is usually contracted from state departments of transportation or from local governments.

Landscape design or architectural establishments are primarily engaged in planning and designing the development of land areas for projects, such as parks and other recreational areas, airports, highways, hospitals, schools, land subdivisions, and commercial, industrial, and residential areas. These companies apply knowledge of land use and location of structures to the site design of landscape projects. Landscape contracting or installation establishments are primarily engaged in installing trees, shrubs, plants, lawns, or gardens, and the construction of walkways, retaining walls, decks, fences, ponds, and other similar "hardscape" structures. Specialized installation services such as irrigation systems, water features, night lighting, and Christmas decorations are becoming more prevalent.

Landscape maintenance establishments provide services such as mowing, trimming, leaf or snow removal, tree removal or trimming, mulching, fertilizing, pest control treatments, and other garden or lawncare services to enhance landscape appearance and health. The prime selling points of these service firms are that they have the knowledge to diagnose problems and the equipment to apply chemicals effectively and safely, and eliminate the need for clients to store toxic chemicals on their premises. Besides offering basic services, many maintenance firms also offer customized programs such as lawn aeration, dethatching, resodding or overseeding, and integrated pest management.

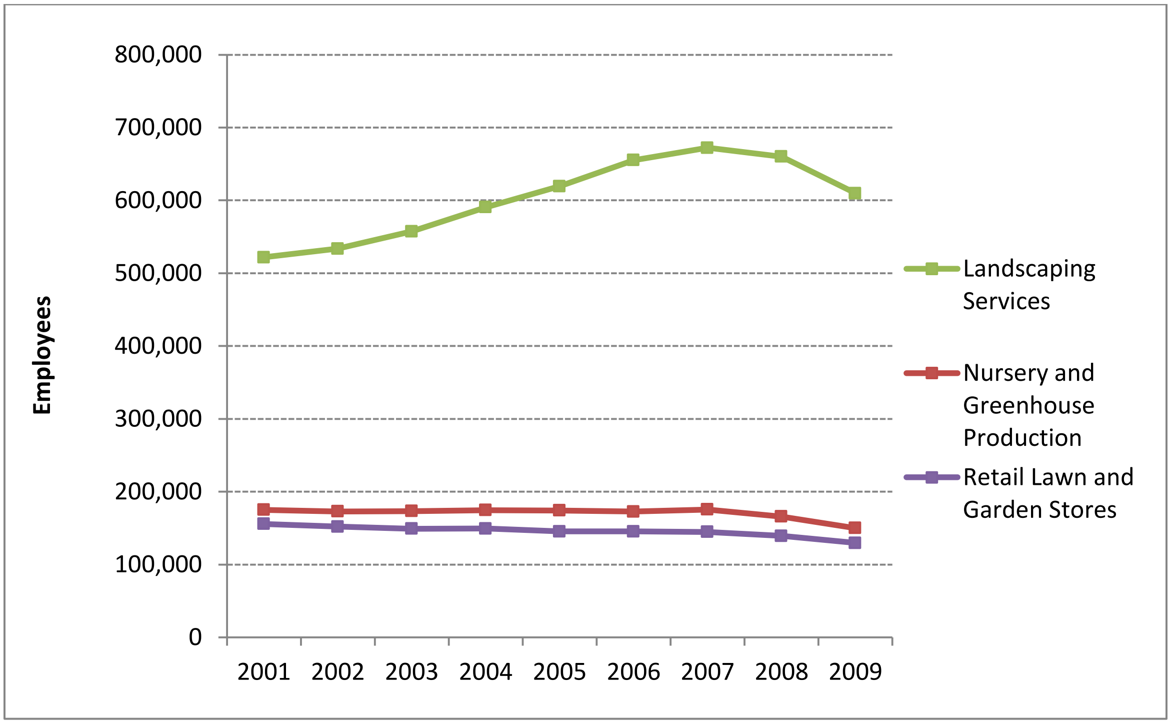
Retailers are another point of contact with end consumers of horticultural products, and include independent garden centers, florists, home centers, mass merchants, and other chain stores. Garden centers are establishments primarily engaged in selling trees, shrubs, other plants, seeds, bulbs, mulches, soil conditioners, fertilizers, pesticides, garden tools, and other garden supplies to the general public. These establishments usually sell products purchased from other vendors, but may sell some plants which they grow themselves. Garden center consumer studies indicate that customer loyalty and repeat business result from a convenient store location, plant quality, customer service, and plant selection.

End Users are the **f**inal consumers of Green Industry products and services. While the vast majority of nursery products used by end users are purchased from Green Industry businesses, this is not the case for services. A significant amount of lawn and landscape services are performed by the end users themselves. However, these services are only for internal consumption, that is, end users do not maintain any landscape plants or green space other than their own. The list of end users includes airports, cemeteries, churches, commercial general business areas, golf courses, homeowners, municipalities, private recreation areas, public roadways, schools and universities, and utilities. Commercial areas are comprised of restaurants, banks, credit unions, commercial building operators, shopping centers, apartments and condominiums, mobile home sites, hotels and motels, medical and nursing care centers, retirement communities and community centers. City park districts, arboretums and zoos, city streets, and other urban public areas are maintained by municipalities. Public roadways encompass both state and county roadsides and highways.

Current Green Industry Situation and Outlook

The green industry has historically been one of the fastest growing sectors in the nation's agricultural economy; often experiencing growth and expansion even during recessionary periods. However, the industry has reached the mature state of its life cycle and has suffered as most businesses with the recession of 2008-09 (Hall, 2010). Growth in employment of the principal sectors of the U.S. Green Industry is charted for the period 2001 to 2009 in Figure 1-2. The impacts of the 2008-09 recession on industry employment are obvious. While businesses responded to the recession by cutting back their work forces, eventually they will have to begin hiring to increase output. Nursery and greenhouse growers who experienced remarkable growth in sales and profits for most of this decade now face stagnant demand for product, abundant supply in the marketplace, and prospective buyers willing to purchase product only if and when needed. Maintaining liquidity, meaning cash or credit available to handle daily operations, is a key industry challenge. Bookings for 2009 sales were down 20 to 30 percent from 2008 for many growers and this has continued in the first half of 2010. The decline in sales and increased expenses to maintain product combine to reduce cash reserves and force many to source additional credit from lenders or suppliers. The housing bust revealed that the rate of green industry growth was also unsustainable, and current economic conditions are retarding industry recovery. Challenges of excess plant material are exacerbated by the recession (although the recession definitely helped the oversupply situation), including a widening and deepening of the housing crisis and the resulting 'spend sparingly' sentiment of consumers. A cash flow 'domino effect' is evident that has even the best companies in all business sectors scrambling to meet payroll and pay bills, suppliers anxious to collect on receivables, and employees hopeful that they retain jobs to pay their mortgages. In recent years, there has been considerable consolidation among large growers in response to consolidation at the retail level. The rise of large, nationwide plant retailers like home centers and mass merchandisers has created a marketing opportunity for large growers who can supply the large volumes these customers require. Some nursery firms have grown rapidly through acquisition during the past decade in order to service these big customers. Those expected to survive the worst economic downturn in decades are adapting by focusing on ‘face time’ with customers, excellent customer service, quality niche products, innovations in marketing, management of excess inventory, and creative means of communicating with prospective buyers. Those with the financial means to do so invested strategically in 2010 by strengthening customer relationships, adjusting product mix and exploring new markets. Many nursery and greenhouse growers are well positioned to withstand the downturn and rebound in the years ahead.

Figure 1-2. Employment trend in the U.S. Green industry, 2001-09



Source: U.S. Bureau of Labor Statistics

Previous Economic Impact Studies for the Green Industry

In spite of the magnitude and recent growth of the Green Industry, there is surprisingly little information that has been developed at the national level regarding the economic impact of the Green Industry. The USDA conducts floriculture and nursery crop surveys to collect information at the grower level, but these data do not include many states and the cash receipts reported for/by growers do not reflect the further economic impacts generated from this production activity. Data from the Census of Agriculture, conducted every 5 years, and Census of Horticultural Specialties, done about every 10 years, is subject to the same limitations. For firms downstream in the supply chain, such as landscapers, re-wholesalers, and retailers, information may be available from state comptrollers, but still have problems with misclassification. To date, no one source of data has proven to be adequate in capturing the total economic importance of the Green Industry.

The very first attempt at developing a national estimate of the economic impact of the green industry was reported in by Hall et al. (2005). Economic impacts for the U.S. Green Industry in 2002 were estimated at $147.8 Billion in output, 1,964,339 jobs, $95.1 Billion in value added, $64.3 Billion in labor income, and $6.9 Billion in indirect business taxes, with these values expressed in 2004 dollars. For the production and manufacturing sectors, including nurseries/greenhouses, lawn and garden equipment manufacturers, and greenhouse manufacturers, total output impacts were $34.6 Billion, employment impacts were 300,677 jobs, and value added impacts were $20.8 Billion. For the horticultural services sectors of landscape services and landscape architects, total output impacts were $57.8 Billion, employment impacts were 753,557 jobs, and value added impacts were $39.0 Billion. For the wholesale/retail trade sectors, total output impacts were $55.5 Billion, employment impacts were 910,104 jobs, and value added impacts were $35.3 Billion. The objective of this study was to update the earlier estimates of the economic impacts of the Green Industry at the national level, utilizing data from primary and secondary sources.

Recognizing the limitations of existing data sources and the critical need for this type of economic impact information, numerous state nursery and landscape associations have sponsored and developed economic impact studies for their respective states. Such associations have found these studies to be useful in communicating the importance of the Green Industry to state legislatures, in gaining assistance and resources, and in combating proposed legislation that would have had negative impacts on the Green Industry. Researchers conducting state-level studies used different research methodologies in their respective analyses, which were completed in different time frames, limiting the comparability of this information. Nonetheless, this chapter attempts to summarize the findings of previous studies as a benchmark from which to compare the results from this study which is national in scope.

Table 1-1 presents an overview of previous economic impact studies that have been conducted in the last ten years regarding the Green Industry in selected states. While there have been other studies conducted to estimate grower-level sales or cash receipts, this summary only presents those studies that attempted to evaluate the post-farm gate economic impacts, including total employment and payroll associated with Green Industry sectors. Some state studies also provided estimates of value added and taxes paid by industry firms. To gain a common basis on which to compare results from each state, total population during the year of the study the state Gross State Product (GSP) were tabulated. GSP is equal to its gross output, including sales or receipts, other operating income and inventory change, minus the value of goods and services purchased other industries or imported. The GSP accounts are consistent with the nation's gross domestic product (GDP), except that it excludes federal civilian and military spending occurring abroad. Table 1-1 shows the estimated Green Industry output (revenue) impact per capita expressed in constant 2004 dollars using the GDP implicit price deflator. Total output impacts estimated in these selected studies were as high as $10.3 Billion in California, $9.2 Billion in Florida, and $9 Billion in Texas. For the entire set of 23 states-level studies conducted over the last decade, total output impacts amounted to almost $70 Billion. Per capita output impacts across all states averaged $346 per person, and ranged from $192 per person in Maryland, to a high of $506 per person in Florida. The employment impacts generated by the Green industry in individual states ranged as high as 222,000 jobs in Texas, 187,859 jobs in Florida and 168,867 jobs in California.

The reader is cautioned against making direct comparisons across states due to the differences in research methods utilized in these studies. For example, some states used mail or telephone surveys to collect primary data, while some used in-person interviews, and others relied on secondary data sources. Another important difference is the number and type of sectors that were included in each respective study, as shown in the right-hand column of Table 1-1. Some states included all end users such as households, golf courses and sports complexes, while others did not. Lastly, the model used to determine economic multipliers differed between the studies. Many of the researchers used the IMPLAN® input-output analysis regional economic modeling system to conduct their respective analysis, while others used the RIMSII multipliers from the U.S Commerce Department-Bureau of Economic Analysis (USDOC-BEA). All of these factors again point to the dire need to conduct a study that is national in scope that uses a common methodology to collect industry data and calculate associated economic impacts.

Table 1-1. Summary of selected recent studies on economic contributions of the Green industry in individual states

State	Year	Output (Revenue) Impact (Million$)	Employment Impact (jobs)	Output Impact per Capita ($) [abc]	Sectors Included [d]
Idaho	1999	662	12,911	442	P, L, F, A, R
Illinois	1999	3,950	160,000	276	P, L, R
South Carolina	1999	1,380	24,710	298	P, L, F, R
Florida	2000	9,164	187,859	506	P, L, R, T
Maryland	2000	1,152	14,800	192	P, L, R
Pennsylvania	2000	3,300	107,000	238	P, L, R
Tennessee	2000	2,782	73,000	432	P, L, R
Texas	2000	9,760	222,000	413	P, L, R
Utah	2000	800	15,000	316	P, L, R
California	2001	10,337	168,867	272	P, R
Louisiana	2001	2,215	56,686	450	P, G, L, R, RHA
Ohio	2001	3,950	96,600	314	P, L, RW, R
Arizona	2002	1,200	24,100	203	P, L
Colorado	2002	1,500	45,000	307	P, L, G, F, BG, R
Minnesota	2002	2,110	28,200	387	P, L, R
Nevada	2002	751	15,736	319	P, RW, L, G
Wisconsin	2002	2,706	43,000	458	P, HH, PG, G
Connecticut	2003	949	41,000	258	P, L, R
Maine	2003	286	10,000	207	P, L, R
Massachusetts	2003	1,860	52,000	271	P, L, R
New Hampshire	2003	438	12,100	322	P, L, R
Rhode Island	2003	329	10,000	289	P, L, R
Vermont	2003	186	5,400	284	P, L, R
North Carolina	2005	4,180	151,982	482	P,L,R,F,A
Alabama	2007	2,893	43,670	663	P,L,R
Colorado	2007	1,780	35,000	398	P,L,F,G,B, RHA
Total		70,620	1,656,621		

Notes/Sources:

[a] Population data: U.S. Census Bureau, State & County Quickfacts (quickfacts.census.gov/qfd/index.html).

[b] Impact per capita equals total Green Industry output impact divided by Total Population.

[c] Output impacts per capita were adjusted using GDP Implicit Price Deflator (US Commerce Dept.), 2005=100.

[d] Sector codes = [P] Producer; [L] Landscape-related; [R] retail; [RW] Re-wholesale; [F] Florist; [G] Golf; [BG] Botanical gardens; [HH] Households; [A] Arborists; [T] Trade; [RHA] Related horticultural activities; [PG] Public government.

Table 1-2. State-level studies of economic impacts of the Green industry, 1978-2009

Year Reported	State	Scope
2009	New England	Horticulture Industry
2009	Arizona	Nursery Industry
2009	California	Floriculture, Nursery, and Garden Center Industry
2007	Colorado	Green Industry
2007	Alabama	Green Industry
2007	Maryland	Horticulture Industry
2006	Kansas	Horticultural Survey
2006	Kansas	Turfgrass Survey
2005	North Carolina	Green Industry
2005	Florida	Nursery and Landscape Industry
2005	Florida	Environmental Horticulture
2005	Ohio	Landscape and Nursery Industry
2004	Arkansas	Horticulture Industry
2004	Wisconsin	Green Industry Survey
2004	New England	Environmental Horticulture
2003	California	Nursery Industry
2003	New Jersey	Turfgrass Industry
2003	New York	Turfgrass Industry
2002	Nevada	Green Industry Operations
2002	Colorado	Green Industry
2002	Michigan	Turfgrass Industry
2002	Arizona	Green Industry
2002	Georgia	Golf Course and Landscape Maintenance
2001	Iowa	Turfgrass Industry
2001	Idaho	Green Industry
2001	Ohio	Green Industry
2001	Louisiana	Green Industry
2001	Illinois	Green Industry
2001	Florida	Environmental Horticulture Industry
2000	Kansas	Horticulture Industry
2000	Texas	Green Industry
2000	Virginia	Turfgrass Industry
2000	Maryland	Horticulture Industry
2000	Missouri	Nursery Industry
2000	Pennsylvania	Green Industry
2000	Minnesota	Nursery and Landscape Industry
1999	South Carolina	Horticulture Industry
1999	North Carolina	Turfgrass
1999	Arizona	Green Industry
1999	Wisconsin	Turfgrass Industry
1998	Missouri	Turfgrass Industry
1998	New England	Environmental Horticulture Industry
1997	Florida	Environmental Horticultural Industry
1997	Oregon	Nursery and Greenhouse Industry
1997	Louisiana	Nursery and Turfgrass Industry
1996	Maryland	Turfgrass Industry
1996	Mississippi	Turfgrass Industry
1996	Washington	Nursery and Landscape Industry
1996	Ohio	Nursery Industry
1995	New Mexico	Turfgrass Industry
1995	Louisiana	Green Industry
1994	Arizona	Green Industry
1994	Kansas	Turfgrass Industry
1994	North Carolina	Turfgrass Industry
1994	South Carolina	Golf Industry
1994	South Carolina	Ornamental Horticulture and Turfgrass Industry
1994	Kansas	Horticulture Industry
1993	Colorado	Green Industry
1993	Texas	Green Industry
1993	Tennessee	Nursery and Floriculture Industry
1990	Michigan	Nursery and Landscape Industry
1989	Ohio	Turfgrass Industry
1989	Kentucky	Turfgrass Industry
1989	Pennsylvania	Turfgrass Industry
1989	Michigan	Turfgrass Industry
1987	Oklahoma	Turfgrass Industry
1986	North Carolina	Turfgrass Industry
1985	New Jersey	Turfgrass Industry
1984	Rhode Island	Turfgrass Industry
1982	Virginia	Turfgrass Industry
1978	Oklahoma	Turfgrass Industry

2. Research Methodology

Industry Sector Classification

The economic sectors associated with the environmental horticulture or “Green” Industry were identified based on their primary product or service activity as described in the North American Industry Classification System (NAICS), or wholesale and retail trade sectors that have significant sales of horticultural merchandise as port of their overall business. The industry groups and sectors, and their corresponding NAICS codes and RIMSII multiplier sectors are indicated in Table 2-1. The *Production and Manufacturing* industry group includes the sectors for *Nursery and Greenhouse Production* and *Lawn and Garden Equipment Manufacturing*. The *Horticultural Services* industry group includes the sectors *Landscaping Services* and *Landscape Architectural Services*. The wholesale sectors within the *Wholesale and Retail Trade* group include *Merchant Wholesalers of Durable Goods* such as lawnmowers and other gardening equipment, and *Merchant Wholesalers of Nondurable Goods* like flowers, nursery stock and florist supplies. Retail sectors that have product line sales of horticultural goods include *Wholesale Electronic Markets, Agents and Brokers, Furniture and Home Furnishings Stores, Electronics and Appliance Stores, Building Material and Garden Equipment and Supplies Dealers, Food and Beverage Stores, Health and Personal Care Stores, Gasoline Stations, Sporting Goods, Hobby, Book, and Music Stores, General Merchandise Stores, Miscellaneous Store Retailers,* and *Non-store Retailers. Retail Lawn and Garden Stores* are classified within the sector *Building Materials and Garden Equipment and Supplies Dealers*, and florists are classified within *Miscellaneous Store Retailers*.

Table 2-1. Classification of economic sectors associated with the Green industry

Industry Group / Sector	NAICS Code*	RIMS II Sector**
Production and Manufacturing		
Nursery and greenhouse production	1114	Greenhouse, nursery, and floriculture production
Lawn and garden equipment manufacturing	333112	Lawn and garden equipment manufacturing
Horticultural Services		
Landscaping services	56173	Services to buildings and dwellings
Landscape architectural services	54132	Architectural, engineering, and related services
Wholesale and Retail Trade		
Merchant wholesalers, durable goods	423	Wholesale trade
Merchant wholesalers, nondurable goods	424	Wholesale trade
Wholesale electronic markets, agents and brokers	425	Retail trade
Furniture and home furnishings stores	442	Retail trade
Electronics and appliance stores	443	Retail trade
Building material and garden equipment and supplies dealers	444	Retail trade
Food and beverage stores	445	Retail trade
Health and personal care stores	446	Retail trade
Gasoline stations	447	Retail trade
Sporting goods, hobby, book, and music stores	451	Retail trade
General merchandise stores	452	Retail trade
Miscellaneous store retailers	453	Retail trade
Non-store retailers	454	Retail trade

* North American Industry Classification System.
***Regional Input-Output Modeling System II* (U.S. Dept. of Commerce, Bureau of Economic Analysis, 2007).

Data Sources

Economic information on the Green Industry in the United States was compiled from a variety of sources. For the nursery and greenhouse sector, national and state information on number of firms, employment, and value of sales were taken from the *National Nursery Survey* for 2008 conducted by the *Green Industry Research Consortium* (Hall, Hodges and Palma, 2010). For the manufacturing, horticultural services and wholesale/retail trade industry sectors, information on number of establishments, employment, payroll and sales or gross receipts were taken from the *2007 Economic Census* In*dustry Report Series* for U.S. totals, and from the *Geographic Area Series* for state-level information (US Census Bureau, 2010). The Economic Census may be considered the most reliable information source available, since it has a well-established statistical methodology, with adjustment for non-responding firms, and provides published reliability parameters. For the wholesale and retail sectors, whose primary business is not in horticulture, employment and payroll were estimated in proportion to horticulture product line sales as a share of total sales. For some states and sectors in which sales, employment and payroll information were non-disclosed because of a small number of firms, as per *Census Bureau* rules, these values were imputed based on the share of total establishments, so that the sum of state values matched U.S. totals. Total horticultural product/service sales valued at $23.5 Billion were allocated in this manner.

Basic data on the number of establishments, employment, payroll, and sales receipts for sectors of the U.S. Green industry in 2007 are shown in Table 2-2. There were a total of 1.4 Million business establishments involved in the industry, including 19,917 production or manufacturing firms, 99,930 horticultural services firms, and 1.28 Million wholesale or retail trade firms. Total reported employment was 1,202,210 employees, and total payroll was $35.9 Billion. Total sales revenues or receipts for horticultural products and services were $176.1 Billion, including $35.3 Billion for producers/manufacturers, $58.3 Billion for horticultural services, and $82.5 Billion for wholesale/retail trade.

Table 2-2. Establishments, sales revenues, payroll and direct employment in U.S. Green industry sectors, 2007

Industry Group / Sector (NAICS)	Number Establishments	Sales Revenues (Million $)	Payroll (Million $)	Direct Employment (jobs)
Production and Manufacturing	**19,917**	**35,386**	**8,773**	**277,736**
Nursery and greenhouse production (1114)	19,803	27,139	8,268	262,941
Lawn and garden equipment manufacturing (333112)	114	8,247	506	14,795
Horticultural Services	**99,930**	**58,276**	**19,129**	**631,511**
Landscaping services (56173)	93,687	53,910	17,389	596,896
Landscape architectural services (54132)	6,243	4,365	1,740	34,615
Wholesale and Retail Trade	**1,279,848**	**82,452**	**7,974**	**292,962**
Building material and garden equipment and supplies stores (444)	91,070	39,004	4,609	163,458
Miscellaneous store retailers (453)	121,911	7,045	874	47,175
Merchant wholesalers, durable goods (423)	254,975	8,681	670	12,355
General merchandise stores (452)	45,855	7,489	711	36,366
Merchant wholesalers, nondurable goods (424)	134,614	11,568	470	9,570
Non-store retailers (454)	59,375	3,368	279	7,408
Food and beverage stores (445)	146,084	2,451	252	12,785
Wholesale electronic markets, agents and brokers (425)	45,394	2,129	46	1,030
Furniture and home furnishings stores (442)	65,144	218	30	1,128
Gasoline stations (447)	118,756	292	10	612
Electronics and appliance stores (443)	50,803	90	9	420
Health and personal care stores (446)	88,452	77	10	350
Sporting goods, hobby, book, and music stores (451)	57,415	40	5	305
Total All Industry Groups	**1,399,695**	**176,113**	**35,876**	**1,202,210**

Wholesale and retail trade sector sales, payroll and employment reflect share of business for horticulture product lines sales.

Sources. Census Bureau, 2007 Economic Census: manufacturing, services and wholesale/retail trade sectors; National Nursery Survey: nursery and greenhouse production sector (2008).

Primary market research data regarding the structure and performance of the *Nursery and Greenhouse Production* sector were generated by the fifth *National Nursery Survey* conducted by the Green Industry Research Consortium (S-1051 Multi-state research project under USDA-NIFA), a group of economists and horticulturists from land-grant institutions across the country. The survey sampled all 50 states in the U.S. using a standard methodology. Lists of firms in each state were compiled from the respective state Departments of Agriculture, resulting in a combined listing of nearly 39,000 nursery operations, from which a sample of 15,000 firms was selected for the survey, with sampling in each state based on its proportion of the overall business population, and where possible stratified by three size classes based on production area, inventory or sales volume. Firms size strata were small (less than five acres), medium (5 to 19 acres), and large (20 or more acres), and sampling was weighted on larger firms, with 100 percent of the large firms, 60 percent of the medium firms, and 25 percent of the small firms. In states for which size information was not available, 40 percent of the identified firms were sampled. A total of 3,044 usable questionnaires were returned, representing an overall response rate 15.9 percent. Survey respondents reported total annual sales of $4.45 Billion in 2008, or an average of $1.73 Million per firm, and total employment of 48,833 permanent and temporary jobs. Based on adjusted population of validated active firms (19,803), total U.S. nursery industry sales were estimated at $27.14 Billion, and total employment was estimated at 262,941 jobs. Further detail on the survey methodology and results were reported by Hodges, Palma and Hall (2010).

Data on product line sales of horticultural goods by the *Wholesale and Retail Trade* sectors were taken from the special series on product line sales for the *2007 Economic Census* (Census Bureau, 2010), and this information is summarized in Tables 2-3 and 2-4. Specific product lines within the retail sector category of *Lawn, Garden and Farm Equipment and Supplies* include *Cut flowers-arranged and unarranged*, *Fertilizer, lime, chemicals and other soil treatments*, *Indoor potted plants-blooming and non-blooming*, *Indoor potted plants and floral items*, Lawn and garden machinery, equipment and parts, *Lawn and garden tools*, *Outdoor nursery stock, All other lawn and garden supplies,* and *All other lawn, garden, and farm equipment and supplies*. Values for farm supplies and equipment were netted-out of figures for retail product line sales. Pertinent product lines within the wholesale trade sectors included *Lawn and garden machinery, equipment and parts* (durable goods) and *Flowers and florists' supplies* (nondurable goods).

Table 2-3. Product line sales of horticulture goods by wholesale trade establishments in the U.S., by state, 2007

State	All Wholesale trade (NAICs 42)	Merchant wholesalers, durable goods (NAICS 423)	Merchant wholesalers, nondurable goods (NAICS 424)	Wholesale electronic markets and agents and brokers (NAICS 425)
	-------------------------------*Thousand Dollars*			---------------------------
Alabama	230.0	95.7	112.7	0.0
Alaska	6.0	6.0	0.0	0.0
Arizona	403.6	140.3	187.9	0.0
Arkansas	288.6	0.0	0.0	0.0
California	2573.7	613.0	1882.2	78.5
Colorado	320.9	137.5	141.9	38.5
Connecticut	275.2	100.8	139.8	26.3
Delaware	44.5	0.0	0.0	0.0
District of Columbia	15.9	0.0	0.0	0.0
Florida	3032.6	530.2	2261.5	240.8
Georgia	1096.0	706.3	291.0	85.1
Hawaii	49.6	3.8	45.9	0.0
Idaho	39.1	26.4	10.9	0.0
Illinois	1436.3	298.1	943.0	195.2
Indiana	308.0	192.6	105.7	0.0
Iowa	254.9	166.6	44.0	0.0
Kansas	181.3	144.5	34.2	0.0
Kentucky	103.9	47.7	44.7	0.0
Louisiana	155.1	79.8	58.3	0.0
Maine	31.1	13.8	16.8	0.0
Maryland	305.9	71.6	194.9	0.0
Massachusetts	308.8	34.5	226.8	21.3
Michigan	446.5	96.6	314.5	27.9
Minnesota	483.0	309.5	138.1	0.0
Mississippi	96.8	61.6	32.1	0.0
Missouri	392.1	243.7	123.5	8.2
Montana	28.8	28.8	0.0	0.0
Nebraska	102.0	74.8	26.8	0.0
Nevada	41.0	8.3	27.0	0.0
New Hampshire	78.6	45.5	33.1	0.0
New Jersey	695.5	233.2	447.7	11.2
New Mexico	31.0	7.1	23.6	0.0
New York	993.9	259.7	675.5	58.8
North Carolina	1258.7	1010.9	240.0	0.0
North Dakota	26.2	24.4	1.8	0.0
Ohio	919.7	403.0	295.5	210.6
Oklahoma	201.8	0.0	0.0	0.0
Oregon	318.1	97.2	180.7	0.0
Pennsylvania	639.9	258.5	335.5	5.1
Rhode Island	29.9	3.4	24.9	0.0
South Carolina	414.6	317.6	85.1	0.0
South Dakota	69.7	29.5	39.6	0.0
Tennessee	408.2	218.6	143.2	21.5
Texas	1605.1	481.1	517.8	29.2
Utah	236.1	202.3	32.1	0.0
Vermont	25.3	10.4	14.8	0.0
Virginia	317.9	145.1	111.0	45.5
Washington	707.5	133.7	535.5	0.0
West Virginia	30.2	18.8	11.4	0.0
Wisconsin	382.2	258.0	118.6	0.0
Wyoming	10.2	10.2	0.0	0.0
Total All States	22,451.8	8,400.6	11,271.7	1,103.6

Source: U.S. Census Bureau

Table 2-4. Product line sales of horticulture goods by retail trade establishments in the U.S., by state, 2007

State	Furniture and home furnishings stores	Electronics and appliance stores	Building material and garden equipment, supply stores	Food and beverage stores	Health and personal care stores	Gasoline stations	Sporting goods, hobby, book, and music stores	General merchandise stores	Miscellaneous store retailers	Non-store retailers	Total All Retail Sectors
	---Million dollars---										
Alabama	2.6	6.3	704.1	16.1	0.0	0.6	2.8	116.7	68.8	7.7	925.7
Alaska	0.0	0.0	45.2	11.3	0.0	0.0	0.0	21.7	13.5	0.0	91.7
Arizona	2.7	0.0	689.5	90.8	0.2	0.5	0.7	113.3	68.7	19.2	985.6
Arkansas	1.5	2.2	477.0	4.2	0.0	23.9	0.0	0.0	0.0	1.8	510.5
California	18.9	3.1	3,718.9	319.3	35.9	0.3	9.9	455.8	514.2	180.8	5,257.2
Colorado	1.4	0.3	736.6	87.6	0.9	1.9	0.9	103.2	67.8	13.7	1,014.3
Connecticut	4.5	0.0	532.4	68.8	0.2	0.0	0.0	68.0	71.1	99.6	844.4
Delaware	0.3	0.0	184.5	7.7	0.0	0.0	0.0	22.5	17.5	0.0	232.5
D.C.	0.0	0.0	7.7	4.2	0.1	0.0	0.0	0.0	20.2	0.0	32.2
Florida	8.8	1.0	2,094.9	183.1	1.7	0.6	1.7	386.4	262.4	96.6	3,037.2
Georgia	20.7	0.6	1,284.7	61.4	0.2	0.2	0.0	186.3	124.7	22.9	1,701.7
Hawaii	0.0	0.0	132.6	19.0	4.8	0.0	0.0	19.1	40.5	5.3	221.2
Idaho	0.2	0.6	193.5	3.6	0.2	1.3	0.2	59.7	16.4	6.7	282.4
Illinois	4.0	2.4	1,701.5	75.0	1.1	16.1	0.0	352.4	213.4	583.8	2,949.7
Indiana	0.6	0.0	1,021.0	42.4	0.1	6.4	0.0	187.4	88.0	119.8	1,465.6
Iowa	0.2	0.0	490.7	21.5	1.5	3.4	0.0	76.5	23.1	6.2	623.1
Kansas	0.6	0.0	409.3	19.8	0.0	1.3	0.0	64.2	27.0	1.9	524.1
Kentucky	4.0	0.4	739.7	11.5	0.0	1.5	0.8	107.8	58.8	10.6	935.2
Louisiana	3.2	1.1	695.0	18.1	0.0	0.9	0.7	114.1	58.1	18.1	909.1
Maine	1.6	0.4	191.9	0.8	0.0	0.3	0.0	31.8	22.2	32.5	281.4
Maryland	1.7	1.3	788.8	73.0	0.6	0.0	0.0	118.6	99.5	63.4	1,146.9
Massachusetts	15.6	0.0	780.4	72.6	0.6	0.0	0.0	113.6	152.9	89.1	1,224.8
Michigan	3.0	8.9	1,090.8	71.2	4.2	0.5	1.1	242.9	145.2	35.6	1,603.4
Minnesota	1.2	0.3	921.2	39.4	0.0	6.7	0.0	111.0	92.3	83.2	1,255.2
Mississippi	0.7	1.3	512.0	2.6	0.1	1.3	0.0	71.0	34.2	8.2	631.4
Missouri	2.1	2.6	1,045.2	28.2	0.9	18.3	0.0	116.7	70.6	37.0	1,321.5
Montana	1.5	1.1	223.1	4.7	0.0	22.9	0.0	19.2	21.8	5.0	299.4
Nebraska	0.4	1.5	541.9	13.4	0.1	4.1	0.0	47.3	16.5	50.3	675.6
Nevada	0.3	0.0	302.1	20.2	1.1	0.1	0.3	37.1	27.9	0.0	389.3
New Hampshire	1.5	0.0	254.5	4.2	0.1	0.1	0.0	48.8	27.4	0.0	336.6
New Jersey	7.0	0.0	1,052.1	129.0	0.3	0.0	0.0	138.0	196.7	35.2	1,558.3
New Mexico	1.3	0.7	168.2	12.2	0.0	0.0	0.2	37.5	17.8	6.6	244.5
New York	6.7	2.0	1,696.8	199.7	1.0	2.4	0.0	229.5	445.1	527.2	3,110.2
North Carolina	6.6	0.8	1,385.7	44.6	0.1	2.2	0.0	200.1	110.3	47.8	1,798.1
North Dakota	0.2	0.0	256.8	2.8	0.0	19.6	0.0	19.2	11.9	0.0	310.5
Ohio	2.3	1.7	1,373.1	77.8	0.6	14.6	0.0	239.8	157.8	170.3	2,038.2
Oklahoma	2.2	0.0	467.2	7.7	0.0	0.0	0.0	0.0	0.0	7.5	484.6
Oregon	1.3	0.0	518.7	31.3	1.3	12.3	0.4	142.8	42.4	104.7	855.1
Pennsylvania	3.1	5.8	1,458.1	103.6	0.4	0.4	0.2	263.9	214.2	68.9	2,118.6
Rhode Island	5.7	0.0	102.5	9.6	0.1	0.0	0.0	18.3	18.6	0.0	154.8
South Carolina	3.5	0.0	663.0	28.9	0.1	0.7	0.0	102.0	51.0	16.9	866.1
South Dakota	0.0	0.0	123.1	3.8	2.8	0.6	0.0	12.6	8.0	0.0	150.9
Tennessee	3.7	1.1	993.6	25.4	0.0	0.2	0.0	132.8	77.2	8.2	1,242.3
Texas	25.6	13.8	2,614.1	154.3	0.7	3.1	3.2	446.5	253.7	81.6	3,596.5
Utah	0.7	0.0	334.2	15.6	0.2	0.5	2.3	66.2	29.7	22.8	472.3
Vermont	1.2	0.0	121.2	4.8	0.1	0.4	0.0	8.7	13.2	62.6	212.0
Virginia	8.2	0.0	1,172.6	70.1	0.4	5.3	0.0	176.7	128.2	11.5	1,573.0
Washington	3.0	0.0	946.0	84.4	1.3	15.2	1.1	192.6	69.1	79.9	1,392.5
West Virginia	0.0	0.0	192.4	3.5	0.2	0.0	0.0	42.1	24.2	3.4	266.0
Wisconsin	0.3	2.5	764.2	41.5	0.1	23.7	0.6	163.4	60.8	39.6	1,096.5
Wyoming	0.4	0.0	89.5	4.6	0.0	4.6	0.0	14.0	10.7	2.4	126.2
Grand Total	186.7	63.6	39,003.7	2,451.0	64.4	219.1	27.1	6,059.5	4,405.5	2,895.8	55,376.5

Source: U.S. Census Bureau. Note: missing values imputed based on number of establishments.

Economic Impact Analysis

The regional economic impacts of the Green Industry were evaluated separately for each state using economic multipliers from the Regional Input-Output Modeling System II (RIMSII) available from the U.S. Commerce Department, Bureau of Economic Analysis (USDOC/BEA, 2007). This input-output system includes over 500 distinct industry sectors. The sectors used for this analysis of the Green Industry are indicated in Table 2-1. Information for these models was derived from the U.S. National Income and Product Accounts, together with regional economic data collected for fiscal year 2007. Input-output models represent the structure of a regional economy in terms of transactions between industries, employees, households, and government institutions (Miller and Blair, 2009).

Economic multipliers derived from the models were used to estimate the total economic activity generated in each state by sales (or output) to final demand or exports. This includes the effects of intermediate purchases by industry firms from other economic sectors (indirect effects) and the effects of industry employee household consumer spending (induced effects), in addition to direct sales by industry firms. The regional models were constructed with households internalized to derive Type II multipliers, which account for the induced effect of household spending. Separate multipliers are provided for output (sales revenues or receipts), employment, value added, and labor income (earnings). The output and employment total effects multipliers for each industry sector and state are shown in Tables 2-5 and 2-6. The multipliers for output, value added, labor income, and indirect business taxes are expressed in units of dollars per dollar final demand or output, while the employment multiplier is expressed in jobs per million dollars final demand. Differences in values of the multipliers reflect the structure of industry sectors and regional mix of supplier industries. The multipliers were applied to estimated industry sales or output in order to estimate total economic impacts using the following formula: $I_{hij} = S_{hi} \text{ x } G_i \,[\, A_{hij} + E_{hi} \text{ x } (\, B_{hij} + C_{hij})]$, where the variables are defined as:

- I_{hij} is total impact for measures (j) of output, employment, value added, labor income, or indirect business taxes, in each sector (i), and state (h).
- S_{hi} is industry sales in sector i and state h.
- E_{hi} is the proportion of industry sales exported or shipped outside the state, by sector i in state h.
- A_{hij} is the direct effects multiplier for measure j in sector i and state h.
- B_{hij} is the indirect effects multiplier for measure j in sector i and state h.
- C_{hij} is the induced effects multiplier for measure j in sector i and state h.
- G_i is the gross margin on sales for sector I in the wholesale and retail trade sectors.

The calculation assumes that only the export portion of output is sold to final demand, and therefore is subject to the indirect and induced effects multipliers, while the remainder of in-state sales is subject to intermediate demand from other business sectors and to direct effects multipliers. Data on exports were taken from the *Impact Analysis for Planning* (*IMPLAN)* database for 2001, except in the case of the nursery and greenhouse sector, where information for some states was taken from the 2008 *National Nursery Survey*. The calculation for retail and wholesale sectors assumed output is reduced to reflect only the gross margin on sales according to national averages taken from the *Annual Benchmark Report for Retail Trade and Food Services, 2005*, and the *Annual Benchmark Report for Wholesale Trade, 2005* (Census Bureau, 2005). The gross margins were 20.1 percent for flower and nursery stock wholesalers, 24.7 percent for general merchandise stores, 26.5 percent for lawn and garden equipment wholesalers, 28.5 percent for food and beverage stores, 29.5 percent for lawn and garden stores, 29.5 percent for building materials and supply stores, 42.3 percent for florists (miscellaneous retailers).

Data were analyzed and results reported for each industry sector and individual states within 8 regions of the U.S., as shown in Figure 2-1.

Table 2-5. Output multipliers for Green industry sectors by state, 2007

State	Greenhouse, nursery, and floriculture production	Lawn and garden equipment manufacturing	Services to buildings and dwellings (Landscaping)	Architectural, engineering, and related services (Landscape Architecture)	Wholesale trade	Retail trade
	----------------------------*Dollars per Dollar Final Demand*--------------------------					
Alabama	1.896	2.209	1.946	1.923	1.785	1.858
Alaska	1.578	1.000	1.827	1.723	1.558	1.626
Arizona	1.834	1.648	1.970	2.033	1.827	1.881
Arkansas	1.693	1.887	1.812	1.748	1.696	1.734
California	2.025	1.843	2.343	2.262	2.031	2.081
Colorado	1.941	1.894	2.250	2.250	2.023	2.061
Connecticut	1.713	1.828	1.907	1.941	1.805	1.840
Delaware	1.603	1.000	1.896	1.768	1.667	1.713
District of Columbia	1.000	1.000	1.359	1.385	1.242	1.297
Florida	1.846	1.623	2.028	2.095	1.871	1.924
Georgia	1.957	1.926	2.194	2.232	2.043	2.105
Hawaii	1.745	1.000	1.999	1.922	1.740	1.794
Idaho	1.659	1.428	1.660	1.710	1.590	1.612
Illinois	1.899	2.500	2.313	2.279	2.087	2.151
Indiana	1.762	2.316	2.067	1.960	1.843	1.908
Iowa	1.637	2.004	1.687	1.677	1.622	1.690
Kansas	1.677	1.669	1.893	1.745	1.656	1.699
Kentucky	1.811	2.222	2.009	1.937	1.819	1.888
Louisiana	1.762	1.634	1.984	1.858	1.709	1.751
Maine	1.752	1.556	1.861	1.882	1.762	1.807
Maryland	1.735	1.744	1.972	2.029	1.823	1.880
Massachusetts	1.715	1.760	2.010	2.101	1.880	1.911
Michigan	1.836	2.375	2.029	2.082	1.915	1.963
Minnesota	1.806	1.897	2.098	2.077	1.925	1.971
Mississippi	1.725	1.912	1.865	1.721	1.651	1.706
Missouri	1.818	2.207	2.033	2.010	1.929	1.990
Montana	1.714	1.000	1.848	1.740	1.594	1.650
Nebraska	1.532	1.631	1.619	1.656	1.579	1.621
Nevada	1.503	1.000	1.782	1.833	1.702	1.737
New Hampshire	1.722	1.000	1.914	1.954	1.788	1.804
New Jersey	1.900	1.793	2.244	2.181	1.975	2.015
New Mexico	1.746	1.000	1.914	1.818	1.628	1.676
New York	1.616	1.746	1.906	1.941	1.792	1.855
North Carolina	1.892	2.197	2.019	2.059	1.914	1.959
North Dakota	1.593	1.000	1.717	1.607	1.522	1.564
Ohio	1.876	2.497	2.183	2.136	1.991	2.046
Oklahoma	1.861	1.967	2.094	1.940	1.786	1.837
Oregon	1.863	1.816	1.918	1.977	1.830	1.880
Pennsylvania	1.964	2.219	2.222	2.191	2.020	2.062
Rhode Island	1.707	1.000	1.865	1.836	1.742	1.770
South Carolina	1.856	2.207	1.983	1.982	1.830	1.923
South Dakota	1.503	1.515	1.566	1.575	1.508	1.551
Tennessee	1.918	2.351	2.129	2.135	1.971	2.057
Texas	2.091	2.007	2.438	2.320	2.069	2.142
Utah	1.975	2.106	2.265	2.193	2.007	2.068
Vermont	1.688	1.000	1.721	1.748	1.581	1.670
Virginia	1.739	1.735	2.011	2.047	1.897	1.933
Washington	1.922	1.653	2.118	2.065	1.873	1.925
West Virginia	1.638	1.000	1.786	1.700	1.586	1.645
Wisconsin	1.798	2.223	1.913	1.936	1.825	1.881
Wyoming	1.473	1.000	1.631	1.506	1.413	1.461

Source: *Regional Input-Output modeling System II (RIMSII)*, Bureau of Economic Analysis

Table 2-6. Employment multipliers for Green industry sectors by state (2007)

State	Greenhouse, nursery, and floriculture production	Lawn and garden equipment manufacturing	Services to buildings and dwellings (Landscaping)	Architectural, engineering, and related services (Landscape Architecture)	Wholesale trade	Retail trade
	---------------------------------*Jobs per Million Dollars Final Demand*-------------------------------					
Alabama	27.17	11.29	34.12	16.31	13.63	23.78
Alaska	24.24	0.00	28.58	13.25	11.60	19.73
Arizona	17.56	7.70	28.98	16.72	12.80	21.41
Arkansas	20.02	10.70	33.29	16.64	13.05	23.80
California	17.92	8.77	29.86	16.25	12.94	21.72
Colorado	28.93	8.51	31.70	16.97	13.38	23.54
Connecticut	25.37	7.44	26.59	13.94	9.93	18.60
Delaware	13.34	0.00	24.70	10.13	8.33	17.39
District of Columbia	0.00	0.00	10.00	2.28	1.58	4.94
Florida	24.11	9.31	31.34	18.31	13.79	22.99
Georgia	18.16	10.79	32.89	17.96	13.75	24.12
Hawaii	30.38	0.00	29.14	16.27	13.84	22.46
Idaho	17.46	8.13	30.42	16.75	12.85	21.90
Illinois	17.47	12.02	29.97	16.75	12.74	22.59
Indiana	25.90	12.09	30.61	17.87	13.76	24.89
Iowa	15.94	9.02	30.38	15.02	12.13	22.87
Kansas	19.98	8.60	26.15	12.72	10.81	21.66
Kentucky	21.93	11.47	31.73	16.92	12.85	23.63
Louisiana	21.73	8.88	34.24	15.87	12.98	22.67
Maine	31.47	7.72	32.19	18.08	14.49	24.83
Maryland	20.02	6.76	28.45	13.92	10.96	19.79
Massachusetts	19.41	8.22	27.10	14.00	10.63	19.12
Michigan	29.44	13.19	31.01	16.16	13.22	24.18
Minnesota	19.16	8.59	30.82	16.38	12.39	23.97
Mississippi	26.25	9.45	33.60	16.19	13.17	23.82
Missouri	21.05	11.13	27.65	14.44	12.88	23.31
Montana	21.82	0.00	34.69	17.64	13.37	24.27
Nebraska	15.14	7.52	31.21	13.27	11.47	22.53
Nevada	16.21	0.00	27.14	14.47	11.66	20.02
New Hampshire	20.05	0.00	27.03	15.29	10.42	18.59
New Jersey	27.69	6.92	26.84	14.17	10.96	19.56
New Mexico	20.46	0.00	31.18	16.92	13.40	22.74
New York	15.65	6.91	24.59	12.30	9.40	18.08
North Carolina	18.80	10.81	34.70	18.64	14.18	23.82
North Dakota	16.72	0.00	30.58	13.91	11.13	21.33
Ohio	30.36	12.98	31.30	18.18	14.19	24.84
Oklahoma	22.72	10.81	34.06	19.10	14.67	24.39
Oregon	24.52	9.36	28.69	17.17	12.23	22.48
Pennsylvania	24.77	10.58	30.84	16.20	12.89	23.31
Rhode Island	26.90	0.00	25.59	13.74	10.55	18.83
South Carolina	31.50	12.95	33.52	17.41	14.26	24.70
South Dakota	14.73	7.02	31.22	14.83	11.58	22.12
Tennessee	22.23	12.30	28.66	17.78	13.44	22.01
Texas	31.87	9.76	36.41	17.63	13.64	23.53
Utah	23.97	12.08	36.99	21.11	16.43	25.64
Vermont	23.74	0.00	31.42	15.79	11.68	20.87
Virginia	20.53	8.99	32.45	14.39	12.13	22.07
Washington	17.82	8.00	28.73	15.94	12.34	21.01
West Virginia	20.34	0.00	29.29	15.98	12.00	22.32
Wisconsin	27.77	10.99	31.89	17.47	13.74	25.15
Wyoming	17.72	0.00	30.78	13.03	10.00	20.67

Source: *Regional Input-Output modeling System II (RIMSII)*, Bureau of Economic Analysis.
Note: Zero values indicate that sector is not present in the state.

Figure 2-1. Map of regions for economic analysis of the Green industry.

Note: Alaska and Hawaii were included in the Pacific region.

3. Results for All Green Industry Sectors

National Economic Contributions by Sector

Economic contribution estimates for the U.S. Green Industry in 2007 are summarized in Table 3-1. Total sales revenues for all sectors were $176.11 Billion, direct output was $117.40 Billion, and total output impacts, including indirect and induced regional economic multiplier effects of nonlocal output, were $175.26 Billion. Total industry payroll was $35.88 Billion and the total labor earnings impact (with multiplier effects) was $53.16 Billion. The total value added impact was $107.16 Billion, including employee compensation, proprietor (business owner) income, other property income and indirect business taxes paid to state/local and federal governments. The industry had direct employment of 1.2 Million fulltime and part-time jobs, and total employment impacts of 1.95 Million jobs in the broader economy.

For the *Production and Manufacturing* Group, including *Nursery and greenhouse Production* and *Lawn and garden equipment manufacturing* sectors, total output impacts were $52.57 Billion, employment impacts were 468,692 jobs, earnings impacts were $13.14 Billion, and value added impacts were $32.13 Billion.

For the *Horticultural Services* Group of *Landscape services* and *Landscape architectural services*, total output impacts were $92.83 Billion, employment impacts were 1.123,428 jobs, earnings impacts were $30.15 Billion, and value added impacts were $54.52 Billion.

For the *Wholesale and Retail Trade* Group, total output impacts were $29.86 Billion, employment impacts were 357,515 jobs, earnings impacts were $9.86 Billion, and value added impacts were $20.51 Billion.

Table 3-1. Summary of economic contributions of the U.S. Green Industry, by group/sector, 2007

Industry Group / Sector (NAICS)	Sales Revenue	Direct Output	Total Output Impact	Payroll	Total Earnings Impact	Total Value Added Impact	Direct Employ-ment	Total Employ-ment Impact
	Million Dollars						*Fulltime & Part-time Jobs*	
***Production and Manufacturing* Group**	**35,386**	**35,386**	**52,572**	**8,773**	**13,145**	**32,128**	**277,736**	**468,692**
Nursery and greenhouse production (1114)	27,139	27,139	40,941	8,268	11,986	27,099	262,941	436,462
Lawn and garden equipment manufacturing (333112)	8,247	8,247	11,632	506	1,160	5,028	14,795	32,230
***Horticultural Services* Group**	**58,276**	**58,276**	**92,830**	**19,129**	**30,151**	**54,521**	**631,511**	**1,123,428**
Landscaping services (56173)	53,910	53,910	86,661	17,389	27,809	50,283	596,896	1,075,343
Landscape architectural services r *(54132)*	4,365	4,365	6,169	1,740	2,342	4,238	34,615	48,085
***Wholesale and Retail Trade* Group**	**82,452**	**23,740**	**29,856**	**7,974**	**9,866**	**20,511**	**292,962**	**357,515**
Building material and garden equipment and supplies stores (444)	39,004	11,896	14,121	4,609	5,300	9,706	163,458	190,839
Miscellaneous store retailers (453)	7,045	3,071	4,047	874	1,181	2,750	47,175	59,829
Merchant wholesalers, durable goods (423)	8,681	2,087	2,985	670	945	2,064	12,355	19,218
General merchandise stores (452)	7,489	1,955	2,220	711	794	1,532	36,366	39,433
Merchant wholesalers, nondurable goods (424)	11,568	1,921	2,852	470	752	1,975	9,570	15,732
Nonstore retailers (454)	3,368	1,455	1,878	279	409	1,278	7,408	12,170
Food and beverage (445)	2,451	706	823	252	288	567	12,785	14,074
Wholesale electronic markets, agents and brokers (425)	2,129	431	658	46	116	453	1,030	2,765
Furniture and home furnishings stores (442)	218	97	114	30	35	78	1,128	1,325
Gasoline stations (447)	292	57	81	10	17	54	612	920
Electronics and appliance stores (443)	90	26	30	9	11	21	420	467
Health and personal care stores (446)	77	23	28	10	11	19	350	403
Sporting goods, hobby, book, and music stores (451)	40	15	18	5	6	12	305	339
Total All Industry Groups	**176,113**	**117,402**	**175,258**	**35,876**	**53,162**	**107,160**	**1,202,210**	**1,949,635**

Values for wholesale and retail trade sectors reflect share of sales, employment and payroll for horticulture product lines, and gross margin on sales for output. Employment data represent fulltime and part-time jobs. Total impact estimates include regional economic multiplier effects.

The largest individual industry sectors in terms of employment and value added impacts were *Landscaping services* (1,075,343 jobs, $50.3 Billion), *Nursery and greenhouse production* (436,462 jobs, $27.1 Billion), and *Building Materials and garden equipment and supplies stores* (190,839 jobs, $9.7 Billion), as shown in Table 3-1 and Figures 3-1 , 3-2, and 3-3. Other industry sectors with employment impacts exceeding 10,000 jobs were *Miscellaneous Store Retailers* (59,829 jobs), *Landscape Architectural Services* (48,085 jobs), *Lawn and garden equipment manufacturing* (32,230 jobs), *General merchandise stores* (39,433 jobs), *Merchant wholesalers of durable goods* (19,218 jobs), *Merchant wholesalers of nondurable goods* (15,732 jobs), *Food and beverage stores* (14,074 jobs), and *Non-store retailers* (12,170 jobs).

Figure 3-1. Employment contributions of U.S. Green industry sectors, 2007

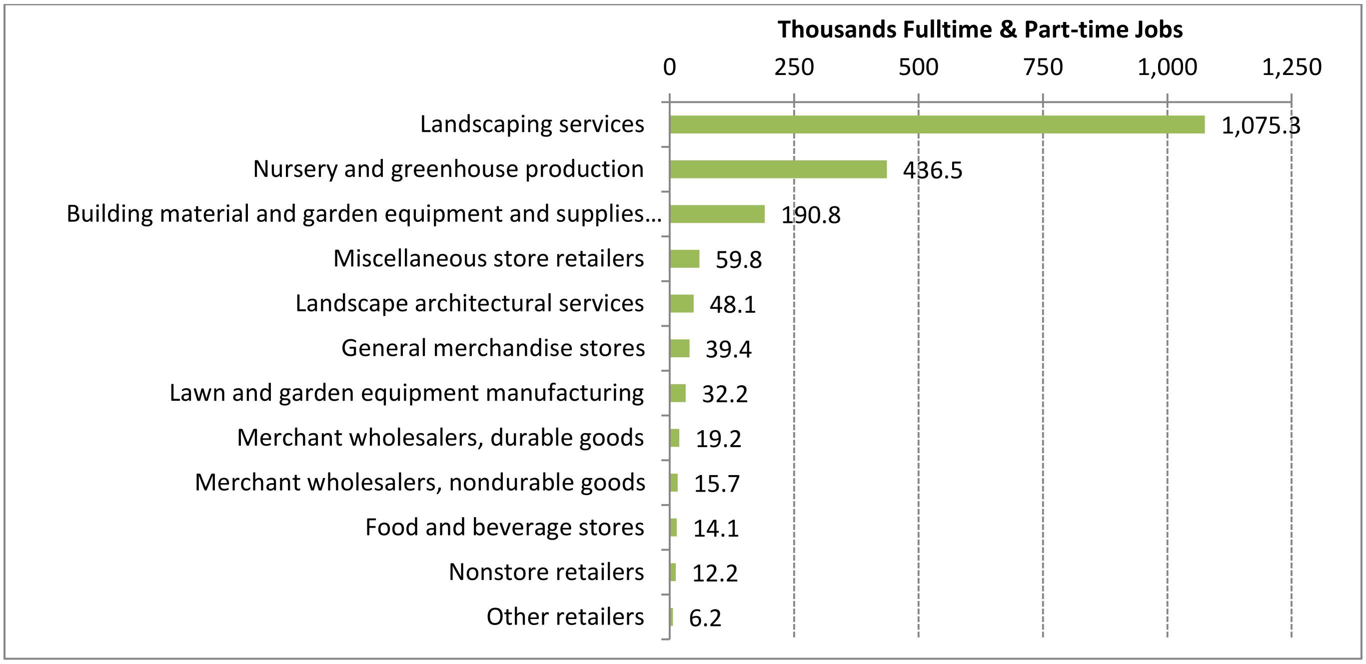


Figure 3-2. Value added contributions of U.S. Green industry sectors, 2007

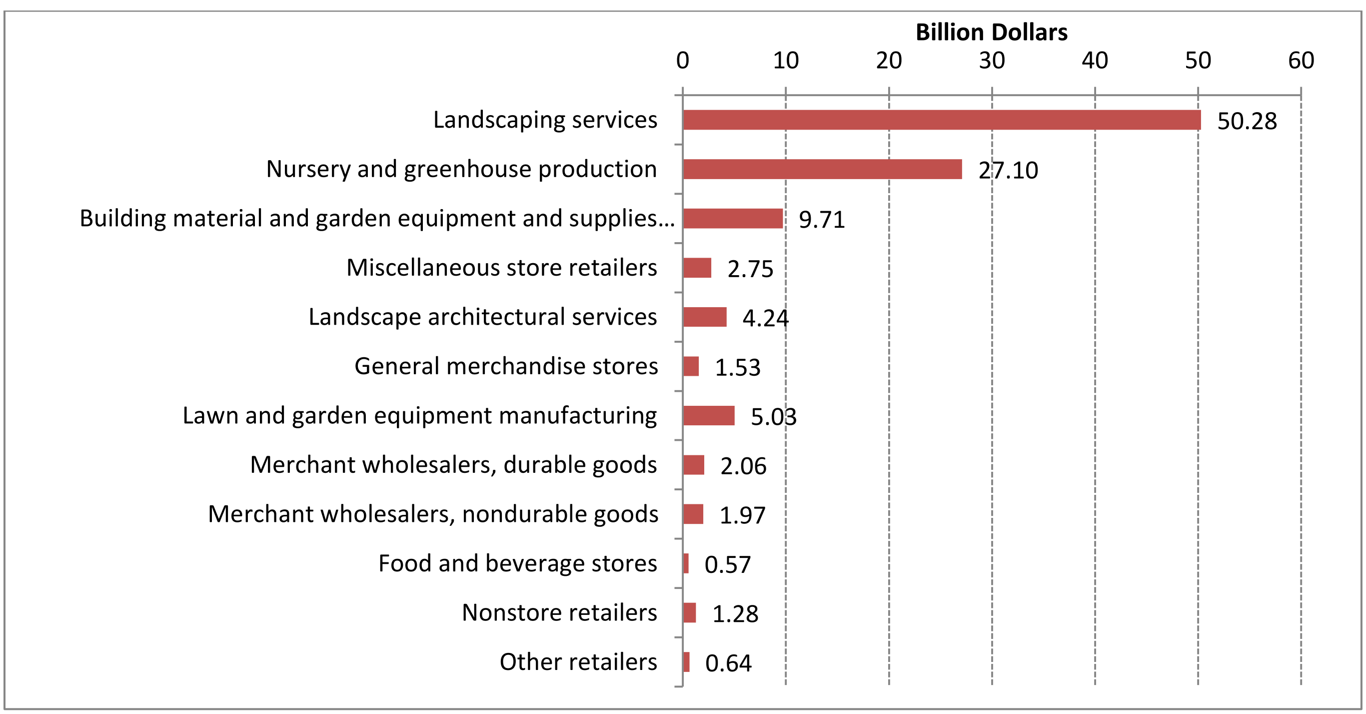
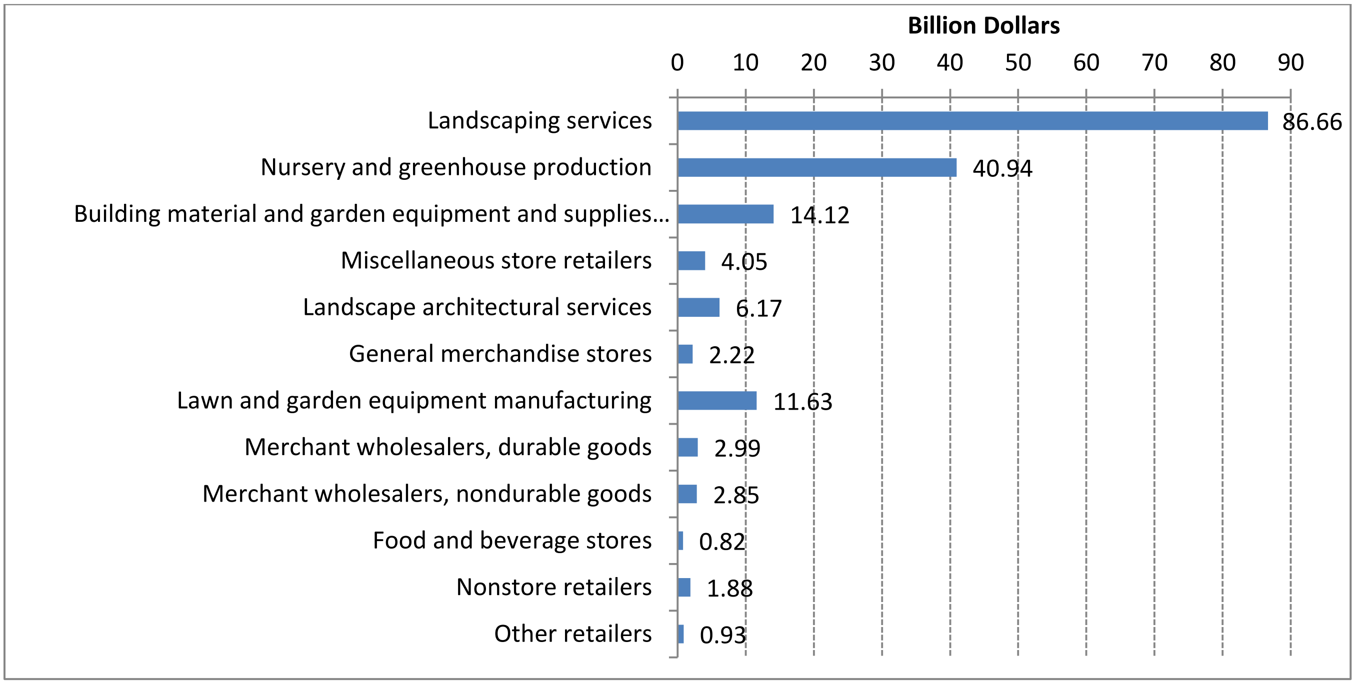


Figure 3-3. Output (revenue) contributions of U.S. Green industry sectors, 2007



State and Regional Economic Contributions

The economic contributions by the Green Industry in 2007 are summarized by state and region in Table 3-2, and by major industry group in Table 3-3 and Figures 3-4 to 3-9, and maps in Figures 3-10 and 3-11. The largest regions in terms of total employment contributions were the Pacific (358,577 jobs), Southeast (351,489 jobs) and Midwest (335,252 jobs), followed by the Appalachian region (208,391 jobs), Mountain (159,440 jobs), Southcentral (154,270 jobs) and Great Plains (30,038 jobs). Generally, output and value added contributions among regions followed the same ordering as employment.

The top-ten individual states in terms of employment contributions were California (257,885 jobs), Florida (188,437 jobs), Texas (82,113 jobs), North Carolina (81,113) jobs, Ohio (79,707 jobs), Pennsylvania (75,604 jobs), New Jersey (67,993 jobs), Illinois (67,382 jobs), Georgia (66,042 jobs), and Virginia (58,677 jobs).

Table 3-2. Summary of total economic contributions of the U.S. Green Industry in regions and states, 2007

Region / State	Number establish-ments	Horticul-tural Sales (Mn$)	Horticul-tural Output (Mn$)	Output Impact (Mn$)	Horticul-tural Employ-ment (jobs)	Employ-ment Impact (jobs)	Horticul-tural Payroll (Mn$)	Labor Income (Earnings) Impact (Mn$)	Value Added Impact (Mn$)
Appalachian	**129,997**	**16,803**	**11,057**	**17,726**	**119,482**	**208,391**	**3,178**	**5,107**	**10,460**
Kentucky	18,136	2,061	1,317	1,862	12,939	20,081	317	468	1,070
North Carolina	43,969	5,641	3,345	5,816	43,140	81,770	1,100	1,886	3,581
Tennessee	27,604	4,071	2,908	4,860	25,335	44,274	660	1,161	2,734
Virginia	32,934	4,634	3,309	4,957	35,286	58,677	1,044	1,519	2,930
West Virginia	7,354	395	178	231	2,782	3,589	57	73	145
Great Plains	**33,256**	**3,359**	**1,802**	**2,482**	**20,793**	**30,038**	**552**	**748**	**1,495**
Kansas	14,112	1,313	780	1,179	10,563	15,685	256	367	685
Nebraska	9,859	1,209	652	793	5,818	7,985	194	237	493
North Dakota	4,334	444	176	251	2,192	3,274	50	72	159
South Dakota	4,951	393	194	258	2,220	3,094	52	72	157
Midwest	**277,808**	**34,482**	**22,275**	**31,961**	**217,731**	**335,252**	**6,245**	**9,066**	**18,999**
Illinois	57,408	9,287	6,152	8,433	42,703	67,382	1,597	2,267	5,001
Indiana	28,301	3,205	1,914	2,895	21,965	35,660	592	890	1,732
Iowa	16,018	1,561	939	1,411	9,213	15,027	265	394	829
Michigan	44,940	4,602	3,142	4,203	30,347	44,373	925	1,261	2,582
Minnesota	26,975	3,044	1,759	2,110	23,537	27,311	551	654	1,327
Missouri	28,146	3,004	1,797	2,108	20,333	23,813	559	646	1,270
Ohio	50,363	6,334	4,225	6,915	46,206	79,707	1,190	1,960	4,108
Wisconsin	25,657	3,445	2,347	3,885	23,427	41,979	566	993	2,150
Mountain	**86,279**	**10,916**	**7,454**	**12,480**	**88,547**	**159,440**	**2,366**	**3,983**	**7,409**
Arizona	23,281	3,623	2,632	4,364	31,341	54,318	786	1,338	2,491
Colorado	24,490	3,000	2,047	3,371	22,128	39,672	693	1,120	2,063
Idaho	7,835	753	519	881	7,694	13,526	167	282	533
Montana	5,970	550	311	452	2,800	5,096	94	140	285
Nevada	9,922	1,421	1,039	1,958	13,612	27,320	357	661	1,158
Utah	11,382	1,279	749	1,233	9,121	16,550	223	376	747
Wyoming	3,399	288	157	219	1,850	2,958	46	66	131
Northeast	**308,411**	**33,188**	**22,647**	**34,227**	**208,059**	**355,469**	**7,053**	**10,439**	**20,962**
Connecticut	17,252	2,526	1,734	2,649	15,421	27,807	542	825	1,623
Delaware	4,352	595	358	743	4,095	8,776	116	217	441
District of Columbia	1,866	115	53	54	598	599	21	21	36
Maine	8,004	643	420	743	5,247	10,655	132	237	452
Maryland	23,162	3,360	2,311	3,815	27,349	47,768	791	1,243	2,331
Massachusetts	31,613	3,425	2,367	3,685	19,331	35,440	781	1,199	2,251
New Hampshire	7,696	1,267	904	1,464	5,083	11,926	278	440	928
New Jersey	47,026	5,529	3,889	6,705	32,709	67,993	1,227	2,023	4,120
New York	100,759	8,321	5,463	6,292	45,791	54,131	1,589	1,818	3,805
Pennsylvania	56,968	6,377	4,448	6,794	45,893	75,604	1,359	2,022	4,185
Rhode Island	5,247	530	361	755	3,411	8,713	111	228	455
Vermont	4,466	500	338	528	3,132	6,057	108	165	335
Pacific	**215,795**	**31,061**	**22,660**	**33,736**	**226,717**	**358,577**	**7,562**	**10,949**	**21,165**
Alaska	2,996	369	279	347	1,513	2,479	77	97	220
California	157,470	22,920	17,236	25,049	170,006	257,885	5,863	8,287	15,836
Hawaii	5,597	1,019	815	1,557	5,871	17,974	271	486	980
Oregon	19,163	2,738	1,888	3,091	23,225	38,794	515	855	1,832
Washington	30,569	4,016	2,443	3,692	26,102	41,443	836	1,225	2,297
Southcentral	**150,768**	**19,444**	**11,526**	**14,128**	**121,031**	**154,270**	**3,537**	**4,289**	**8,998**
Arkansas	12,959	3,204	1,492	2,106	16,305	23,999	365	536	1,256
Louisiana	19,473	2,303	1,543	1,961	10,924	16,280	471	589	1,264
New Mexico	7,905	905	703	751	5,231	5,794	227	242	501
Oklahoma	15,785	3,427	1,479	1,923	20,126	26,084	423	565	1,270
Texas	94,647	9,605	6,309	7,387	68,445	82,113	2,050	2,357	4,708
Southeast	**198,164**	**27,060**	**18,181**	**29,130**	**200,547**	**351,489**	**5,411**	**8,716**	**17,959**
Alabama	21,595	2,225	1,387	2,594	15,078	33,675	452	814	1,603
Florida	98,177	14,489	9,925	15,289	113,922	188,437	3,108	4,770	9,737
Georgia	44,472	6,264	4,247	6,354	41,677	66,042	1,166	1,785	3,811
Mississippi	12,981	1,312	790	1,221	9,284	15,197	198	313	689
South Carolina	20,939	2,770	1,832	3,672	20,587	48,139	488	1,034	2,119
Total All Regions	**1,400,478**	**176,313**	**117,601**	**175,868**	**1,202,907**	**1,952,925**	**35,905**	**53,297**	**107,446**

Table 3-3. Total employment and value added contributions of the U.S. Green Industry in regions and states, by industry group, 2007

Region / State	Employment (Fulltime & Part-time Jobs)				Value Added (Million Dollars)			
	Production and Manufac-turing	Horticultural Services	Wholesale and Retail Trade	Total All Industry Groups	Production and Manufac-turing	Horticultural Services	Wholesale and Retail Trade	Total All Industry Groups
Appalachian	**47,043**	**126,900**	**34,448**	**208,391**	**3,262.6**	**5,279.7**	**1,917.8**	**10,460.0**
Kentucky	3,960	10,524	5,597	20,081	350.1	439.8	280.4	1,070.2
North Carolina	13,366	56,339	12,066	81,770	569.8	2,265.0	746.0	3,580.8
Tennessee	18,051	19,067	7,157	44,274	1,484.0	849.6	400.6	2,734.2
Virginia	11,293	39,344	8,039	58,677	850.3	1,663.7	416.0	2,930.0
West Virginia	373	1,627	1,589	3,589	8.5	61.6	74.7	144.9
Great Plains	**4,234**	**15,372**	**10,432**	**30,038**	**243.4**	**696.9**	**554.4**	**1,494.8**
Kansas	2,672	9,517	3,495	15,685	75.3	436.8	173.1	685.2
Nebraska	658	3,698	3,630	7,985	135.1	166.7	191.5	493.2
North Dakota	260	1,004	2,010	3,274	2.4	44.0	112.9	159.4
South Dakota	644	1,153	1,297	3,094	30.6	49.5	76.9	156.9
Midwest	**82,204**	**172,548**	**80,500**	**335,252**	**5,471.3**	**9,048.9**	**4,478.3**	**18,998.6**
Illinois	10,536	41,905	14,941	67,382	1,461.2	2,538.3	1,001.9	5,001.3
Indiana	4,129	22,034	9,497	35,660	228.1	1,022.7	481.6	1,732.4
Iowa	3,231	7,307	4,488	15,027	278.9	315.7	233.9	828.5
Michigan	9,950	22,880	11,543	44,373	721.1	1,288.7	572.0	2,581.8
Minnesota	10,163	8,536	8,613	27,311	294.4	551.6	480.5	1,326.5
Missouri	2,432	13,168	8,213	23,813	232.4	608.1	429.5	1,270.1
Ohio	27,789	36,918	14,999	79,707	1,462.6	1,771.9	873.5	4,108.0
Wisconsin	13,974	19,800	8,206	41,979	792.6	951.9	405.5	2,150.0
Mountain	**12,116**	**124,043**	**23,281**	**159,440**	**672.5**	**5,459.1**	**1,277.6**	**7,409.2**
Arizona	2,605	45,448	6,265	54,318	308.2	1,845.5	337.0	2,490.7
Colorado	3,855	29,887	5,930	39,672	167.4	1,560.8	335.2	2,063.4
Idaho	3,045	8,402	2,079	13,526	87.5	343.9	101.9	533.3
Montana	235	2,448	2,412	5,096	55.9	111.0	117.8	284.6
Nevada	388	24,690	2,242	27,320	18.6	1,003.0	136.8	1,158.4
Utah	1,521	11,475	3,554	16,550	27.1	517.8	202.4	747.4
Wyoming	468	1,692	799	2,958	7.8	77.2	46.3	131.3
Northeast	**90,973**	**204,664**	**59,831**	**355,469**	**5,407.2**	**11,944.3**	**3,610.3**	**20,961.7**
Connecticut	5,128	18,266	4,413	27,807	312.4	1,033.3	277.0	1,622.7
Delaware	301	6,811	1,664	8,776	11.0	319.1	110.5	440.6
District of Columbia		180	419		599	16.4	19.8	36.2
Maine	2,193	6,667	1,795	10,655	67.5	291.3	93.7	452.5
Maryland	8,230	33,746	5,791	47,768	367.9	1,627.2	335.8	2,330.9
Massachusetts	1,551	27,344	6,545	35,440	78.8	1,802.4	370.0	2,251.1
New Hampshire	2,793	6,289	2,844	11,926	422.6	325.8	179.4	927.8
New Jersey	21,044	38,253	8,696	67,993	1,263.6	2,304.0	552.2	4,119.8
New York	14,631	25,966	13,533	54,131	954.5	1,923.7	927.2	3,805.5
Pennsylvania	31,560	32,637	11,407	75,604	1,736.1	1,864.1	584.6	4,184.8
Rhode Island	1,452	5,872	1,390	8,713	52.9	319.8	82.4	455.0
Vermont	2,089	2,632	1,335	6,057	139.8	117.2	77.8	334.9
Pacific	**96,332**	**219,823**	**42,422**	**358,577**	**8,048.1**	**10,546.2**	**2,570.3**	**21,164.6**
Alaska	781	873	825	2,479	116.7	55.9	47.0	219.7
California	59,817	170,643	27,425	257,885	5,866.1	8,310.3	1,659.0	15,835.5
Hawaii	10,052	6,582	1,340	17,974	623.8	283.5	72.5	979.8
Oregon	19,730	14,342	4,723	38,794	936.5	606.7	289.3	1,832.5
Washington	5,951	27,383	8,109	41,443	505.0	1,289.8	502.4	2,297.2
Southcentral	**29,625**	**66,455**	**58,190**	**154,270**	**2,783.2**	**3,070.9**	**3,143.7**	**8,997.8**
Arkansas	2,658	5,763	15,577	23,999	260.8	193.4	801.4	1,255.6
Louisiana	5,866	5,740	4,674	16,280	760.3	247.8	255.9	1,264.1
New Mexico	1,492	2,908	1,394	5,794	297.7	133.6	69.6	500.9
Oklahoma	1,898	5,958	18,227	26,084	73.5	237.8	958.4	1,269.6
Texas	17,710	46,087	18,316	82,113	1,390.8	2,258.4	1,058.4	4,707.5
Southeast	**109,455**	**193,623**	**48,411**	**351,489**	**6,525.8**	**8,474.9**	**2,958.3**	**17,959.0**
Alabama	9,752	17,666	6,257	33,675	609.3	669.4	324.3	1,602.9
Florida	68,783	99,862	19,792	188,437	3,861.1	4,562.2	1,313.4	9,736.7
Georgia	18,305	35,004	12,732	66,042	1,316.9	1,703.1	791.4	3,811.4
Mississippi	5,058	6,613	3,525	15,197	273.0	232.0	184.3	689.2
South Carolina	7,557	34,478	6,104	48,139	465.6	1,308.3	345.0	2,118.8
Total All Regions	**471,981**	**1,123,428**	**357,515**	**1,952,925**	**32,414.0**	**54,521.0**	**20,510.7**	**107,445.8**

Values for wholesale and retail trade sectors reflect share of sales, employment and payroll for horticulture product lines. Estimates include regional economic multiplier effects.

Figure 3-4. Employment contributions of the Green industry in U.S. regions, 2007

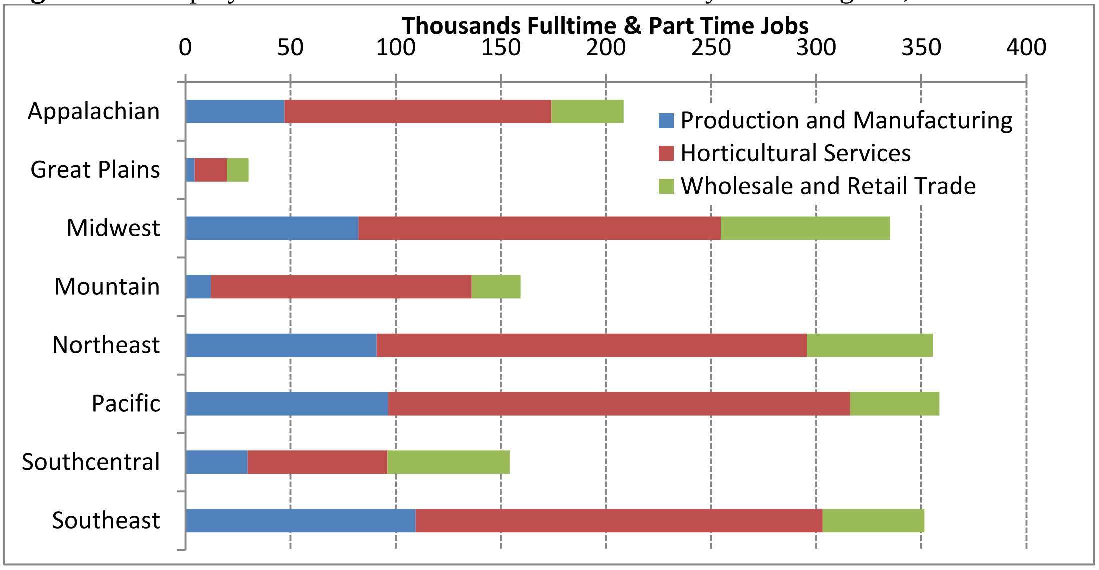


Figure 3-5. Output contributions of the Green industry in U.S. regions, 2007

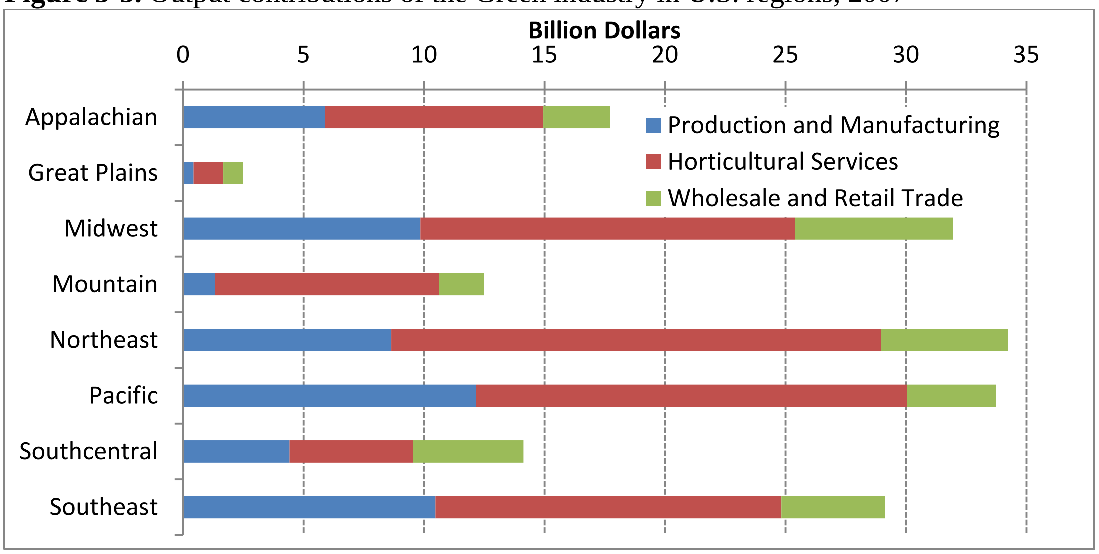


Figure 3-6. Value added contributions of the Green industry in U.S. regions, 2007

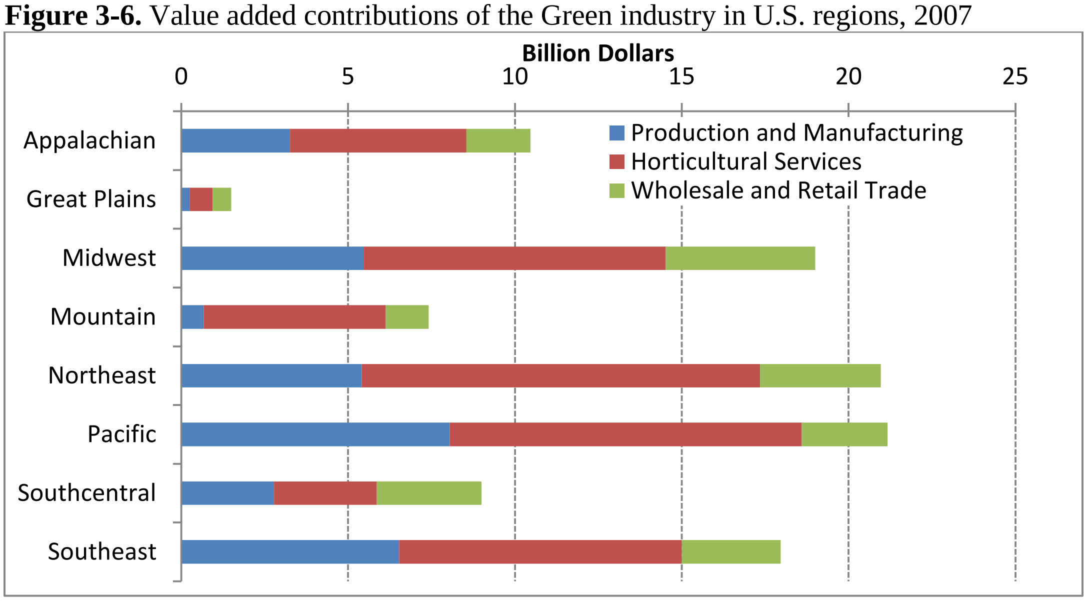


Figure 3-7. Employment contributions of the Green industry in U.S. states, 2007

Figure 3-8. Value added contributions of the Green industry in U.S. states, 2007

Figure 3-9. Output contributions of the Green industry in U.S. states, 2007

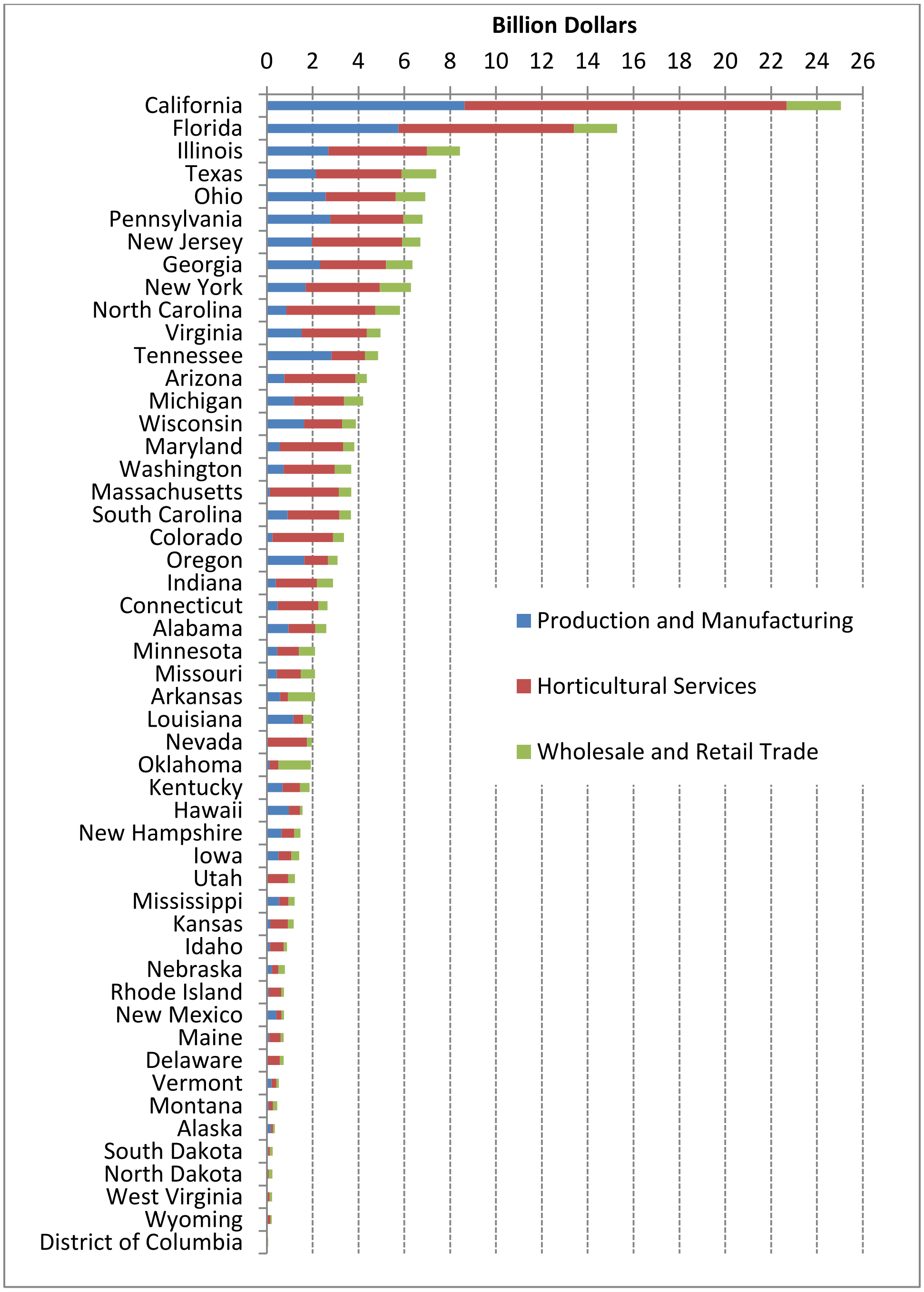


Figure 3-10. Map of employment contributions of the U.S. Green industry, 2007

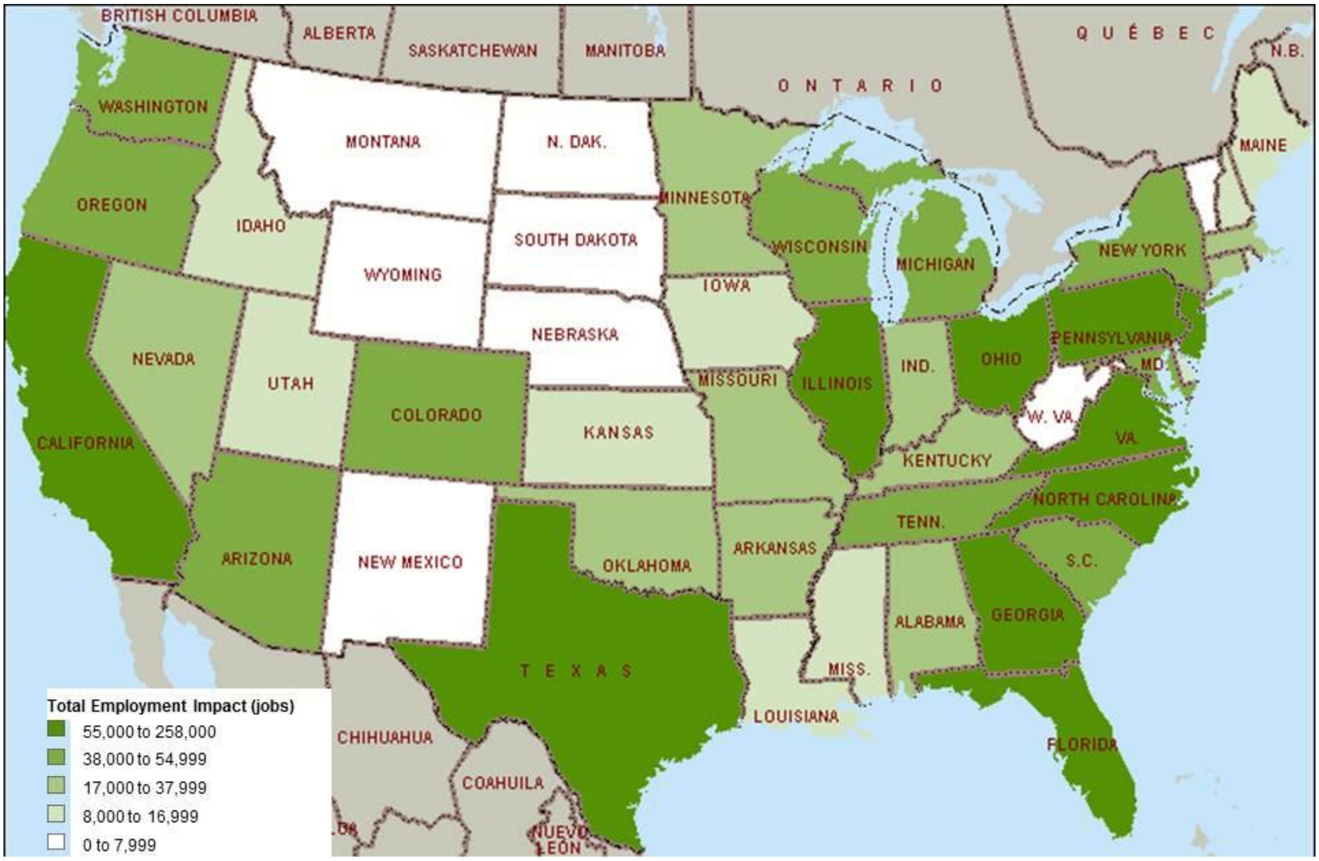
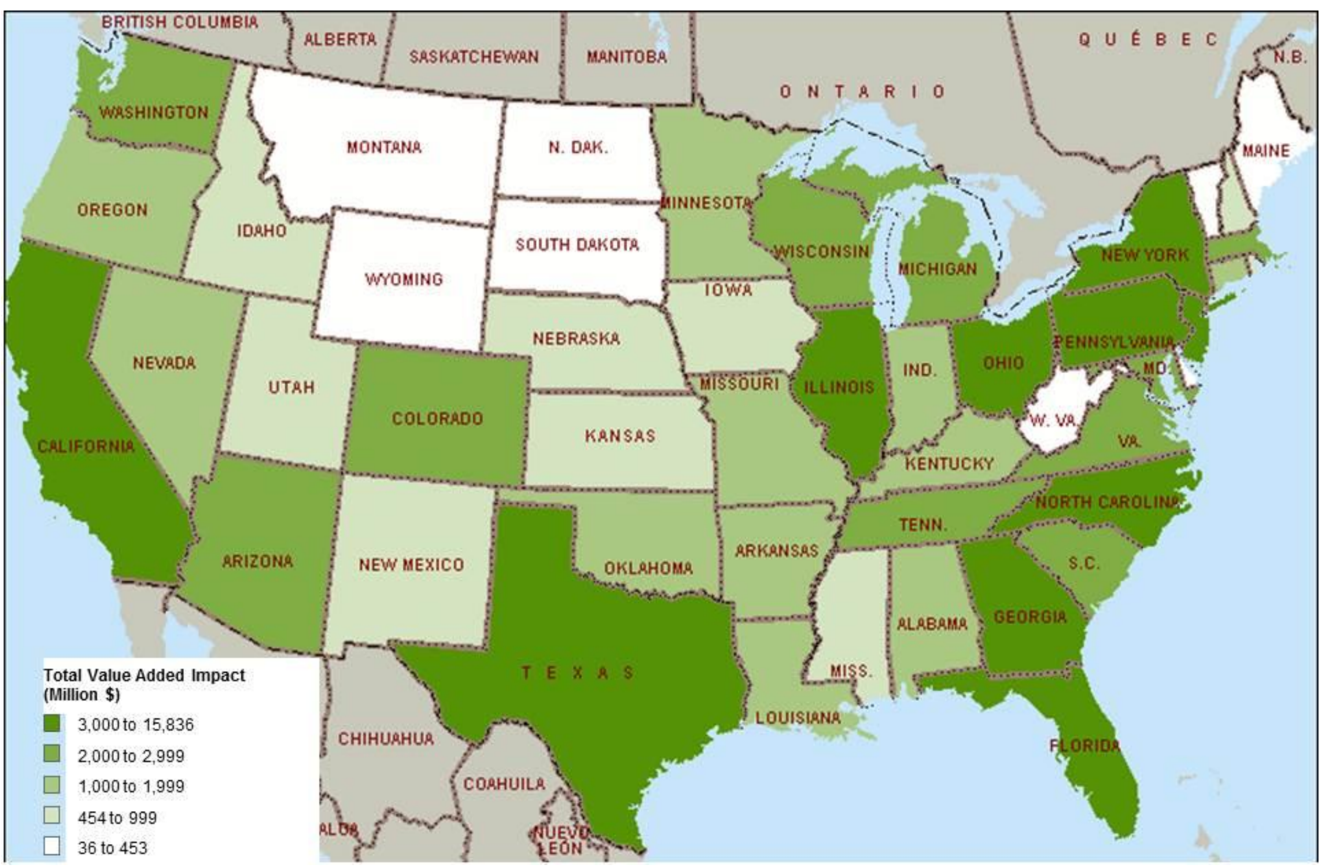


Figure 3-11. Map of value added contributions of the U.S. Green industry, 2007



Contribution to Gross Domestic or State Product

The contribution of the Green industry to Gross Domestic Product (GDP) is a measure of the industry's importance to the overall economy. GDP is equivalent to the sum of value added by all industries, and alternatively represents gross output minus intermediate purchases of goods and services from other U.S. industries or imports (USDOC-BEA). The total value added of the U.S. Green Industry ($107.45 Billion) represented 0.76 percent of U.S. GDP ($14,062 Billion) in 2007.

Gross State Product (GSP) is the state-level counterpart of GDP for the nation. The contribution of the Green industry to GSP in each state is presented in Figure 3-12, and a map of these data is shown in Figure 3-13. The top ten states with the highest percentage contribution to GSP were New Hampshire (1.60%), Hawaii (1.52%), Vermont (1.38%), South Carolina (1.34%), Arkansas (1.29%), Florida (1.31%), Tennessee (1.13%), Oregon (1.10%), Idaho (0.98%), and Alabama (0.97%).

Figure 3-12. Value added contributions by the Green industry as a share of Gross State Product, by state, 2007

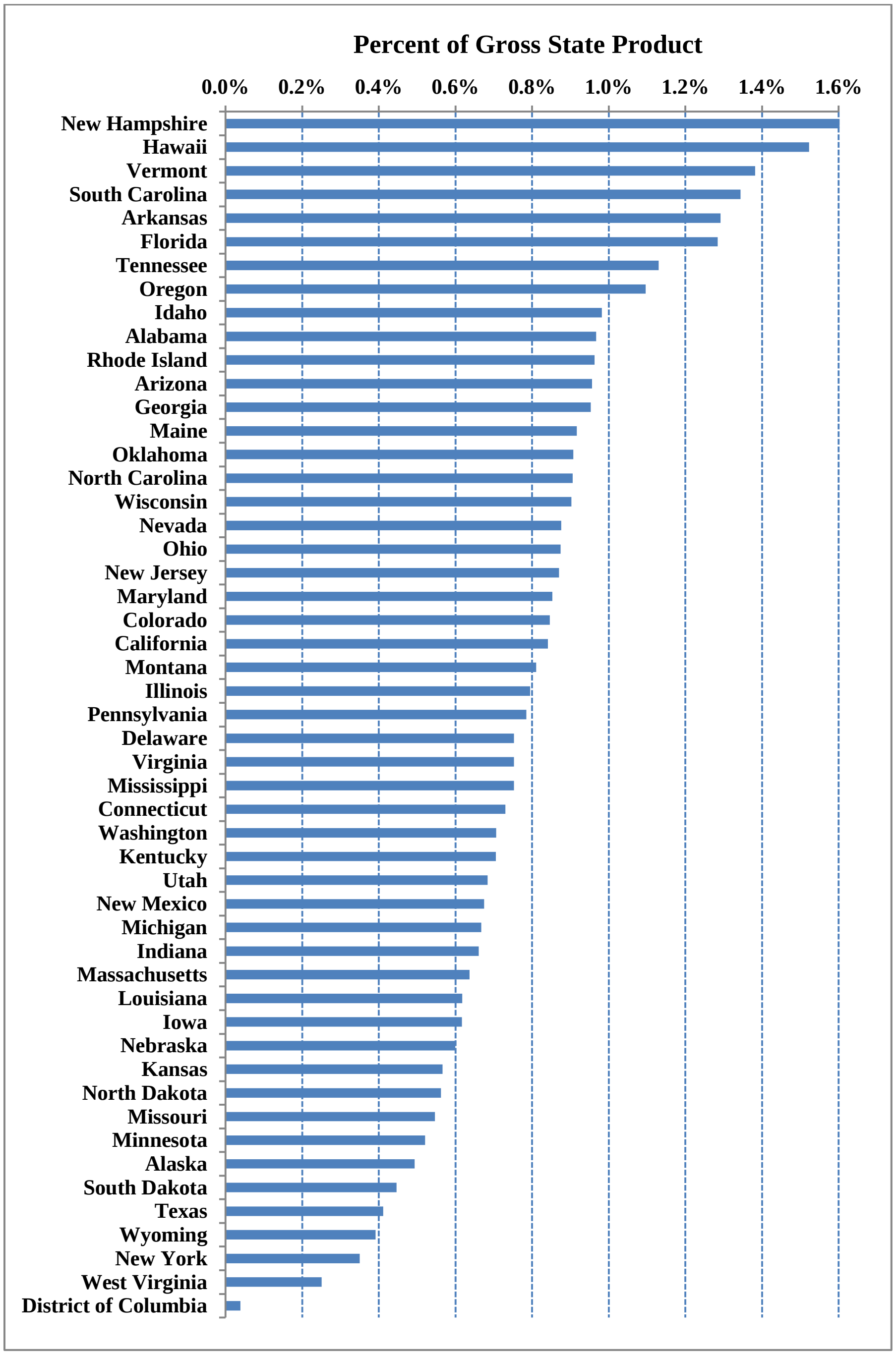


Figure 3-13. Map of value added contributions by the Green industry as a share of Gross State Product, 2007

Changes in Economic Impacts 2002-2007

Changes in estimated economic impacts of the U.S. Green Industry from 2002 to 2007 are shown in Table 3-4, with values for 2002 adjusted using the GDP implicit price deflator to express all values in 2007 dollars. Total horticultural sales increased by 3.5 percent from 2002 to 2007 and total output impacts increased by 29.2 percent, or an average annual rate of 5.8 percent over the five year period. While the *Production and Manufacturing* industry group and *Horticultural Services* group had substantially increased output impacts of 36.8 percent and 44.6 percent, respectively, the *Wholesale and Retail Trade* group declined by 9.7 percent during this period. Value Added impacts increased by 22.2 percent, however, labor income impacts declined by 11.2 percent. Direct employment also declined by 2.7 percent but total employment impacts increased by 20.4 percent. The *Production and Manufacturing* industry group had the highest increase in employment impacts (56%), followed closely by the *Horticultural Services* industry group (49%). The *Wholesale and Retail Trade* Industry Group, however, registered a significant decline of nearly 37 percent in employment impacts during the 2002-07 period.

Table 3-4. Comparison of economic impacts of the U.S. Green Industry, 2002 and 2007

Measure	2002 (adjusted)*	2007	Percent change*
Horticultural sales (Million$)	170,099	176,113	3.5
Output impact ($Million)	135,682	175,258	29.2
Production & Manufacturing	38,419	52,572	36.8
Horticultural Services	64,190	92,830	44.6
Wholesale & Retail Trade	33,073	29,856	-9.7
Value Added impact (Million$)	87,725	107,160	22.2
Labor income impact (Million$)	59,862	53,162	-11.2
Direct Employment (jobs)	1,235,557	1,202,210	-2.7
Employment impact (jobs)	1,619,322	1,949,635	20.4
Production & Manufacturing	300,677	468,692	55.9
Horticultural Services	753,557	1,123,428	49.1
Wholesale & Retail Trade	565,087	357,515	-36.7

*Values adjusted for inflation using GDP implicit price deflator (US Commerce Dept.)

4. Results for the *Production and Manufacturing* Industry Group

Production and manufacturing activity in the U.S. Green Industry includes the sectors for *Nursery and greenhouse production*, and *Lawn and garden equipment manufacturing*. The activities included within each sector are indicated in Table 4-1.

The *Nursery and greenhouse production* sector is comprised of establishments primarily engaged in growing nursery products, nursery stock, shrubbery, bulbs, fruit stock, sod, and so forth, under cover or in open fields and/or growing short rotation woody trees with a growth and harvest cycle of 10 years or less for pulp or tree stock. As a cross reference to other related industry sectors, establishments primarily engaged in operating timber tracts (i.e., growing cycle greater than 10 years) are classified under *Timber Tract Operations* (113110); establishments primarily engaged in producing seedling trees for planting for commercial timber production are classified under *Forest Nurseries and Gathering of Forest Products* (113210); establishments primarily engaged in retailing nursery, tree stock, and floriculture products primarily purchased from others are classified under *Nursery, Garden Center, and Farm Supply Stores* (NAICS 444220).

The *Lawn and garden equipment manufacturing* sector is comprised of establishments primarily engaged in manufacturing of powered lawn mowers, lawn and garden tractors, and other home lawn and garden equipment such as tillers, shredders, and yard vacuums and blowers. As a cross reference to other related industry sectors, establishments primarily engaged in manufacturing commercial mowing and other turf and grounds care equipment are classified under *Farm machinery and equipment manufacturing* (NAICS 333111); establishments primarily engaged in manufacturing non-powered lawn and garden shears, edger, pruners, and lawnmowers are classified under *Cutlery and hand-tool manufacturing* (NAICS 33221).

Table 4-1. Products included in the production and manufacturing group of the green Industry

Industry Sector (NAICS code)	Products
Nursery & greenhouse production (1114)	Nursery products, nursery stock, shrubbery, bulbs, fruit stock, sod grown under cover or in open fields, short rotation woody trees with a growing and harvesting cycle of ten years or less.
Lawn & garden equipment manufacturing (333112)	Manufacturing of powered lawn mowers, lawn and garden tractors, and other home lawn and garden equipment such as tillers, shredder and yard vacuums and blowers.

The number of establishments, employment, payroll, sales receipts and total economic impact estimates for the *Production and Manufacturing* Group of the U.S. Green Industry in 2007-08 are shown in Table 4-2. There were a total of 20,700 business establishments involved in these sectors of the industry, mostly as nursery and greenhouse producers, with a relatively small number of lawn and garden equipment manufacturing firms (114). Total sales receipts in 2007 were $35.6 Billion, including $27.1 Billion for nurseries and $8.2 Billion for lawn and garden equipment manufacturers. The production and manufacturing sectors represented about 20 percent of the overall Green Industry sales receipts. *Nursery and greenhouse production* firms are typically rather small, with average annual sales of $1.3 Million compared to average sales of $72.3 Million for *Lawn and garden equipment manufacturers*. For lawn and garden equipment manufacturers, total reported employment was 14,795 employees and total payroll was $506 Million. Employment for the *Nursery and greenhouse production* sector totaled 278,434 employees, with an annual payroll amounting to $8.3 Billion. Total economic impacts for this industry group, including regional multiplier effects, were output of $53.2 Billion, employment of 471,981 jobs, value added of $32.4 Billion, and labor income of $13.3 Billion. Collectively, the *Production and Manufacturing* Group represented 30 percent of overall Green Industry output impacts, 24 percent of employment impacts, and 30 percent of value added impacts. Maps of value added impacts and employment impacts in each state are shown in Figures 4-1 and 4-2.

Nursery and Greenhouse Production

Table 4-3 shows number of establishments, sales, payroll, and the total economic impacts for the *Nursery and greenhouse production* sector by region and state in 2007-08. There were nearly 20,000 establishments in this sector with total sales of $27.14 Billion, and total output (revenue) impacts exceeding $40.94 billion. Direct employment in this sector was 262,941jobs and total employment impacts were 436,462 jobs. Total payroll was $8.27 Billion, and total labor income impacts were $11.99 Billion. Total value added impacts were $27.10 Billion. The top five individual states in terms of output impacts for this sector were California ($8.48 Billion), Florida ($5.73 Billion), Pennsylvania ($2.55Billion), Texas ($2.04 Billion), and New Jersey ($1.97 Billion). Collectively, these top five states accounted for 45 percent of farms, 45 percent of employment impacts and 50 percent of industry output impacts. The second tier of states with large output impacts included Ohio ($1.49 Billion), Georgia ($1.47 Billion), New York ($1.23 Billion), Hawaii ($1.18 Billion), Louisiana ($1.16 Billion), Illinois ($1.11 Billion), Virginia ($1.06 Billion), and Tennessee ($1.02 Billion). Combined, these top 13 states represented about 75 percent of total industry output impacts, while the top 20 states represented 85 percent. The two top states of California and Florida both had over 5,000 nursery and greenhouse farms, while New York and Pennsylvania had over 3,000 farms, and Texas, North Carolina, Michigan, Ohio, and Tennessee all had over 3,500 farms. The states of California and Florida had value added impacts of $5.81 Billion and $3.85 Billion, respectively. The employment impacts represented an average of 16.1 jobs per Million dollars output, and the value added impacts amounted to 66 percent of total output impacts.

Lawn and Garden Equipment Manufacturing

Total economic impacts of the *Lawn and garden equipment manufacturing* sector along with the number of establishments, sales and payroll are summarized by region and state in Table 4-4. This sector is relatively concentrated, with only 114 manufacturing firms present in 20 states. Sales and output impacts were $8.25 Billion, and $11.53 Billion, respectively. This sector provided a direct employment of 11,632 jobs, and generated total employment impacts of 14,797 jobs. The top five individual states in terms of output impacts were Tennessee ($1.78 Billion), Illinois ($1.56 Billion), Wisconsin ($1.29 Billion), Ohio ($1.07 Billion), and Georgia ($828 Million). These states accounted for 37 percent of industry firms, 56 percent of output impacts, and 57 percent of employment impacts. The second tier of states with significant output impacts included Arizona ($629 Million), South Carolina ($623 Million), Kentucky ($469 Million), Oregon ($454 Million), New York ($452 Million), and Virginia ($451 Million). The top 11 states represented 82 percent of total industry output impacts. Again, these results show that this sector is more concentrated than the *Nursery and greenhouse* sector. The top four states for employment impacts were Tennessee (5,862 jobs), Wisconsin (4,002 jobs), Ohio (3,220 jobs), and Illinois (2,965 jobs). Total value added impacts in these four states exceeded $2.63 Billion, with Tennessee the highest ($812 Million). The employment impacts represented an average of 4.24 jobs per million dollars output by this sector, and the value added impacts amounted to 45 percent of total output impacts.

Table 4-2. *Production and manufacturing* industry group: establishments, employment, payroll, sales, and total economic impacts, by region and state, 2007-08*

Region / State	Number of establish-ments	Sales (Million$)	Payroll (Million$)	Output Impact (Million$)	Employment (jobs)	Employment Impact (jobs)	Labor Income Impact (Million$)	Value Added Impact (Million$)
Appalachian	**2,133**	**3,827**	**693**	**5,898**	**29,004**	**47,043**	**1,179**	**3,263**
Kentucky	264	536	71	677	2,839	3,960	101	350
North Carolina	979	598	182	858	10,842	13,366	253	570
Tennessee	645	1,633	221	2,829	8,780	18,051	487	1,484
Virginia	194	1,053	216	1,521	6,239	11,293	334	850
West Virginia	51	8	2	13	304	373	4	8
Great Plains	**181**	**326**	**86**	**430**	**3,371**	**4,234**	**111**	**243**
Kansas	56	95	24	153	2,140	2,672	37	75
Nebraska	56	191	54	216	469	658	60	135
North Dakota	23	2	1	4	239	260	1	2
South Dakota	46	38	8	56	523	644	13	31
Midwest	**3,075**	**6,913**	**1,233**	**9,855**	**54,940**	**82,204**	**1,923**	**5,471**
Illinois	600	2,096	288	2,692	6,420	10,536	429	1,461
Indiana	217	318	82	389	3,494	4,129	99	228
Iowa	167	317	72	505	1,992	3,231	112	279
Michigan	504	1,009	237	1,169	8,117	9,950	276	721
Minnesota	334	310	90	458	8,598	10,163	130	294
Missouri	385	381	66	436	2,102	2,432	77	232
Ohio	679	1,542	295	2,575	15,447	27,789	547	1,463
Wisconsin	189	941	103	1,630	8,770	13,974	253	793
Mountain	**563**	**939**	**155**	**1,323**	**8,760**	**12,116**	**247**	**672**
Arizona	42	554	41	763	1,329	2,605	86	308
Colorado	142	172	53	252	2,693	3,855	75	167
Idaho	162	67	21	133	2,352	3,045	39	87
Montana	17	82	25	82	235	235	25	56
Nevada	51	17	2	38	243	388	7	19
Utah	82	34	10	43	1,454	1,521	12	27
Wyoming	67	11	3	12	454	468	3	8
Northeast	**4,685**	**5,127**	**1,372**	**8,638**	**46,578**	**90,973**	**2,285**	**5,407**
Connecticut	121	378	110	466	3,824	5,128	134	312
Delaware	47	10	3	18	238	301	4	11
Maine	366	74	23	100	1,722	2,193	30	68
Maryland	223	311	89	567	5,292	8,230	157	368
Massachusetts	119	90	25	122	1,195	1,551	34	79
New Hampshire	34	433	122	642	460	2,793	176	423
New Jersey	413	917	266	1,974	5,632	21,044	539	1,264
New York	1,428	1,318	287	1,688	11,439	14,631	379	955
Pennsylvania	1,715	1,410	389	2,773	14,742	31,560	748	1,736
Rhode Island	44	44	13	81	876	1,452	23	53
Vermont	175	141	44	207	1,159	2,089	62	140
Pacific	**3,339**	**8,845**	**2,654**	**12,145**	**60,114**	**96,332**	**3,545**	**8,048**
Alaska	33	150	37	178	349	781	44	117
California	2,537	6,783	2,136	8,630	43,615	59,817	2,641	5,866
Hawaii	94	476	145	962	1,588	10,052	277	624
Oregon	283	869	159	1,635	10,204	19,730	359	936
Washington	392	567	177	740	4,358	5,951	224	505
South-central	**1,386**	**3,157**	**882**	**4,421**	**13,664**	**29,625**	**1,208**	**2,783**
Arkansas	82	394	49	575	1,557	2,658	84	261
Louisiana	346	875	259	1,168	2,292	5,866	338	760
New Mexico	92	405	125	424	1,271	1,492	130	298
Oklahoma	160	101	30	109	1,838	1,898	32	74
Texas	707	1,381	418	2,144	6,706	17,710	624	1,391
Southeast	**5,338**	**6,452**	**1,728**	**10,473**	**62,002**	**109,455**	**2,782**	**6,526**
Alabama	368	437	136	947	2,524	9,752	273	609
Florida	3,850	3,528	1,110	5,750	39,821	68,783	1,727	3,861
Georgia	484	1,603	351	2,327	12,531	18,305	528	1,317
Mississippi	250	343	57	535	3,193	5,058	99	273
South Carolina	386	541	73	913	3,933	7,557	155	466
Grand Total	**20,700**	**35,585**	**8,802**	**53,183**	**278,434**	**471,981**	**13,280**	**32,414**

Impact estimates include regional multiplier effects.

*Sales and employment data for nursery and greenhouse production are for 2008.

Table 4-3. *Nursery and greenhouse production* sector: establishments, employment, payroll, sales, and total economic impacts, by region and state, 2007-08*

Region / State	Number of Establishments	Sales (Million$)	Output Impact (Million$)	Employment (jobs)	Employment Impact (jobs)	Payroll (Million$)	Labor Income Impact (Million$)	Value Added Impact (Million$)
Appalachian	**2,025**	**1,948**	**3,118**	**25,273**	**38,552**	**579**	**889**	**2,038**
Kentucky	238	147	203	2,095	2,774	44	59	132
North Carolina	954	588	829	10,811	13,209	181	247	556
Tennessee	614	544	1,015	6,573	12,034	162	287	659
Virginia	168	661	1,057	5,490	10,163	190	293	683
West Virginia	51	8	13	304	373	2	4	8
Great Plains	**150**	**248**	**295**	**2,966**	**3,498**	**71**	**84**	**189**
Kansas	40	37	72	1,779	2,186	11	19	45
Nebraska	46	181	190	429	518	52	55	124
North Dakota	23	2	4	239	260	1	1	2
South Dakota	41	27	29	519	535	8	8	19
Midwest	**2,888**	**3,517**	**4,942**	**49,142**	**68,753**	**1,025**	**1,409**	**3,194**
Illinois	567	831	1,112	4,873	7,459	236	311	708
Indiana	191	240	266	3,089	3,473	67	74	170
Iowa	154	217	290	1,793	2,505	65	84	189
Michigan	486	716	805	7,555	8,989	217	241	548
Minnesota	323	309	455	8,594	10,147	90	129	293
Missouri	360	183	189	1,720	1,789	52	53	123
Ohio	640	860	1,493	14,239	24,489	250	420	949
Wisconsin	167	162	332	7,281	9,903	50	96	213
Mountain	**516**	**436**	**643**	**8,181**	**10,641**	**134**	**190**	**429**
Arizona	25	68	127	769	1,336	21	38	84
Colorado	127	171	248	2,687	3,833	53	74	166
Idaho	162	67	133	2,352	3,045	21	39	87
Montana	17	82	82	235	235	25	25	56
Nevada	46	6	9	240	268	2	2	5
Utah	72	31	32	1,444	1,455	9	10	22
Wyoming	67	11	12	454	468	3	3	8
Northeast	**4,610**	**4,551**	**7,924**	**45,194**	**88,941**	**1,326**	**2,210**	**5,124**
Connecticut	121	378	466	3,824	5,128	110	134	312
Delaware	47	10	18	238	301	3	4	11
Maine	366	74	100	1,722	2,193	23	30	68
Maryland	218	310	563	5,287	8,207	89	156	366
Massachusetts	119	90	122	1,195	1,551	25	34	79
New Hampshire	30	424	616	443	2,675	122	172	410
New Jersey	413	917	1,974	5,632	21,044	266	539	1,264
New York	1,405	928	1,228	10,686	13,596	260	339	785
Pennsylvania	1,672	1,235	2,549	14,132	30,705	370	719	1,637
Rhode Island	44	44	81	876	1,452	13	23	53
Vermont	175	141	207	1,159	2,089	44	62	140
Pacific	**3,224**	**8,353**	**11,536**	**59,564**	**95,154**	**2,634**	**3,501**	**7,814**
Alaska	33	150	178	349	781	37	44	117
California	2,453	6,682	8,485	43,318	59,275	2,125	2,620	5,808
Hawaii	94	476	962	1,588	10,052	145	277	624
Oregon	265	481	1,177	9,960	19,126	151	338	763
Washington	379	565	734	4,348	5,919	177	223	503
Southcentral	**1,216**	**2,823**	**3,833**	**12,943**	**27,405**	**855**	**1,127**	**2,535**
Arkansas	57	97	107	986	1,110	28	31	71
Louisiana	320	872	1,158	2,273	5,806	258	336	756
New Mexico	92	405	424	1,271	1,492	125	130	298
Oklahoma	141	98	99	1,826	1,841	30	30	69
Texas	607	1,350	2,044	6,587	17,157	413	600	1,342
Southeast	**5,174**	**5,264**	**8,651**	**59,677**	**103,517**	**1,644**	**2,576**	**5,775**
Alabama	340	432	931	2,500	9,656	135	270	602
Florida	3,800	3,521	5,731	39,791	68,661	1,109	1,723	3,852
Georgia	435	1,014	1,474	11,387	15,664	310	435	987
Mississippi	235	146	234	2,815	4,155	44	67	150
South Carolina	364	151	281	3,184	5,381	46	81	185
Grand Total	**19,803**	**27,139**	**40,941**	**262,941**	**436,462**	**8,268**	**11,986**	**27,099**

Impact estimates include regional multiplier effects.
*Sales and employment data for nursery and greenhouse production are for 2008.

Table 4-4. *Lawn and garden equipment manufacturing* sector: establishments, employment, payroll, sales, and total economic impacts, by region and state, 2007

Region / State	Number of Establishments	Sales (Million$)	Output Impact (Million$)	Employment (jobs)	Employment Impact (jobs)	Payroll (Million$)	Labor Income Impact (Million$)	Value Added Impact (Million$)
Appalachian	**16**	**1,855**	**2,706**	**3,647**	**8,090**	**111**	**273**	**1,189**
Kentucky	4	387	469	737	1,159	26	41	216
Tennessee	8	1,080	1,785	2,172	5,862	58	194	812
Virginia	4	387	451	737	1,068	26	38	161
Great Plains	**9**	**57**	**79**	**357**	**471**	**13**	**17**	**29**
Kansas	9	57	79	357	471	13	17	29
Midwest	**42**	**3,365**	**4,811**	**5,685**	**12,895**	**202**	**491**	**2,228**
Illinois	13	1,259	1,558	1,529	2,965	51	113	742
Indiana	8	72	101	382	537	14	20	47
Iowa	1	97	207	184	680	7	26	86
Michigan	3	291	356	553	917	20	33	169
Missouri	2	194	234	369	573	13	21	103
Ohio	7	678	1,068	1,193	3,220	44	124	506
Wisconsin	8	775	1,286	1,475	4,002	53	155	574
Mountain	**5**	**484**	**629**	**549**	**1,225**	**20**	**47**	**220**
Arizona	5	484	629	549	1,225	20	47	220
Northeast	**14**	**558**	**658**	**1,325**	**1,750**	**44**	**63**	**256**
New York	4	387	452	737	991	26	38	166
Pennsylvania	10	170	206	588	759	18	25	91
Pacific	**13**	**475**	**558**	**468**	**885**	**17**	**32**	**210**
California	9	88	103	234	307	9	12	38
Oregon	4	387	454	234	578	8	21	172
Southcentral	**3**	**291**	**448**	**553**	**1,445**	**20**	**48**	**181**
Arkansas	3	291	448	553	1,445	20	48	181
Southeast	**12**	**1,162**	**1,744**	**2,212**	**5,470**	**79**	**189**	**714**
Georgia	6	581	828	1,106	2,489	40	87	318
Mississippi	2	194	293	369	859	13	30	120
South Carolina	4	387	623	737	2,122	26	72	277
Grand Total	**114**	**8,247**	**11,632**	**14,795**	**32,230**	**506**	**1,160**	**5,028**

Impact estimates include regional multiplier effects.

Figure 4-1. Map of value added contributions by the production and manufacturing sectors of the U.S. Green industry, 2007-08

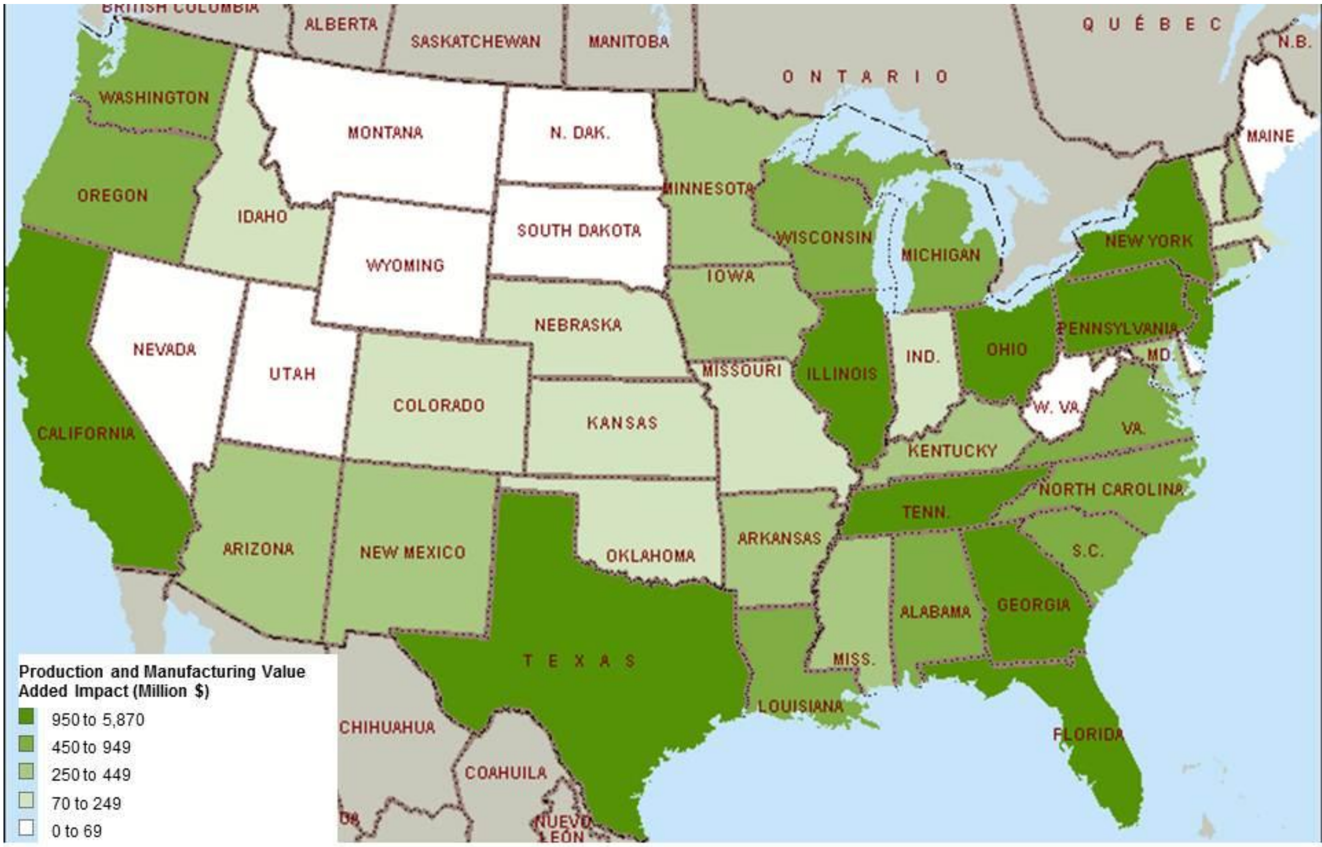


Figure 4-2. Map of employment contributions by the production and manufacturing sectors of the U.S. Green industry, 2007-08

5. Results for the *Horticultural Services* Industry Group

The *Horticultural Services* industry group includes firms that provide landscape design, installation (construction), and maintenance services. The *Landscape services* and *Landscape architectural services* sectors are classified under NAICS codes 561730 and 541320, respectively. A list of specific services provided by each of these sectors is presented in Table 5-1.

Table 5-1. Specific services provided by the *Horticultural Services* industry group

Landscape Services Sector	
Arborist Services	Plant And Shrub Maintenance In Buildings
Cemetery Plot Care Services	Plant Maintenance Services
Fertilizing Lawns	Pruning Services, Ornamental Tree And Shrub
Garden Maintenance Services	Seasonal Property Maintenance Services (e.g. Snow Plowing)
Hydroseeding Services (e.g., Decorative, Erosion Control Purposes)	Seeding Lawns
Landscape Care And Maintenance Services	Shrub Services (e.g, Bracing, Planting, Pruning, Removal, Spraying)
Landscape Contractors (Except Construction)	Snow Plowing Services Combined With Landscaping Services
Landscape Installation Services	Sod Laying Services
Landscaping Services (Except Planning)	Spraying Lawns
Lawn Care Services (e.g., Fertilizing, Mowing, Seeding, Spraying)	Tree And Brush Trimming, Overhead Utility Line
Lawn Fertilizing Services	Tree Pruning Services
Lawn Maintenance Services	Tree Removal Services
Lawn Mowing Services	Tree Services (e.g., Bracing, Planting, Pruning, Removal, Spraying)
Lawn Seeding Services	Tree Surgery Services
Lawn Spraying Services	Tree Trimming Services
Line Slash (i.e., Rights Of Way) Maintenance Services	Tropical Plant Maintenance Services
Maintenance Of Plants And Shrubs In Buildings	Turf (Except Artificial) Installation Services
Mowing Services (e.g., Highway, Lawn, Road Strip)	Weed Control And Fertilizing Services (Except Crop)
Ornamental Tree And Shrub Services	
Landscape Architectural Services Sector	
Architects' Offices, Landscape	Landscape Architectural Services
Architects' Private Practices, Landscape	Landscape Consulting Services
Architectural Services, Landscape	Landscape Design Services
City Planning Services	Landscape Planning Services
Garden Planning Services	Ski Area Design Services
Golf Course Design Services	Ski Area Planning Services
Industrial Land Use Planning Services	Town Planners' Offices
Land Use Design Services	Town Planning Services
Land Use Planning Services	Urban Planners' Offices
Landscape Architects' Offices	Urban Planning Services
Landscape Architects' Private Practices	

The *Landscaping services* sector is comprised of (1) establishments primarily engaged in providing landscape care and maintenance services and/or installing trees, shrubs, plants, lawns, or gardens and (2) establishments primarily engaged in providing these services along with the design of landscape plans and/or the construction (i.e., installation) of walkways, retaining walls, decks, fences, ponds, and similar structures. As a cross-reference**,** firms in this sector do not include establishments primarily engaged in installing artificial turf or in constructing or installing walkways, retaining walls, decks, fences, ponds, or similar structures, which are classified in under *Construction* (NAICS 23); planning and designing the development of land areas for projects, such as parks and other recreational areas; airports, highways, hospitals, schools, land subdivisions, and commercial, industrial, and residential areas (without also installing trees, shrubs, plants, lawns/gardens, walkways, retaining walls, decks, and similar items or structures), which are classified in *Landscape architectural services* (541320); retailing landscaping materials and providing the installation and maintenance of these materials, which are classified under *Nursery, garden center, and farm supply stores* (444220).

The *Landscape architectural services* sector is comprised of establishments primarily engaged in planning and designing the development of land areas for projects, such as parks and other recreational areas, airports, highways, hospitals, schools, land subdivisions, and commercial, industrial, and residential areas, by applying knowledge of land characteristics, location of buildings and structures, use of land areas, and design of landscape projects. Cross-references in the NAICS database do not include establishments primarily engaged in providing landscape care and maintenance services and/or installing trees, shrubs, plants, lawns, or gardens along with the design of landscape plans, which are classified under *Landscaping services*.

Table 5-2 presents the number of establishments, sales, payroll, employment, and estimates of the economic impacts of the *Horticultural Services* industry group in the U.S by region and state. There were nearly 100,000 firms in this industry in the U.S. in 2007. Total sales were $58.28 Billion and total output impacts were $92.83 Billion. Direct employment was 631,511 jobs and total employment impacts were 1,123,428 jobs. Total payroll was $19.13 Billion, and total labor income impacts were $30.15 Billion. Total value added impacts generated were $54.52 Billion. The states of California and Florida were the top two states in this group with $14.05 Billion and $7.65 Billion in output impacts, respectively, followed by Illinois ($4.30 Billion), New Jersey ($3.93 Billion), and North Carolina ($3.88 Billion). Total number of firms providing horticultural services was 99,930, representing 7 percent of the total number of establishments in the Green industry. The *Horticultural Services* industry group contributed $54.5 Billion in value added, which was almost 51 percent of the total for all sectors in the U.S. Green industry. Maps of value added impacts and employment impacts in each state are shown in Figures 5-1 and 5-2.

Landscape Services

Table 5-3 presents the economic characteristics and total impacts of the *Landscape services* sector by region and state. The states providing the highest values of landscape services were (in rank order): California, Florida, Illinois, New Jersey, North Carolina, and Texas. These states had more than $3.00 Billion in output impacts, ranging from $12.3 Billion for California to $3.4 Billion for Texas. These top six states represented 40 percent of the national total, with combined output impacts of $34.2 Billion. Other states with more than $2.00 Billion in output impacts were New York, Ohio, Arizona, Pennsylvania, Georgia, Virginia, Maryland, Massachusetts, Colorado, South Carolina, Michigan, and Washington. These states combined represent 77 percent of the all economic impacts for the *Landscape services* sector for 2007 with a total of $66.4 Billion in output impacts. In terms of employment, the *Landscape services* sector created 1,075,343 jobs nationally. The states with the highest employment impacts were California, Florida, North Carolina, Arizona, Texas, and Illinois, all with more than 40,000 jobs. These six states generated 435,800 jobs, representing 40 percent of the total work force in *Landscape services* sector. Virginia, New Jersey, Ohio, South Carolina, Georgia, Maryland, and Pennsylvania, were the states all with more than 30,000 in employment impacts. These top states generated a combined total of 678,500 jobs and accounted for 63 percent of all employment impacts in *Landscape services* sector. Although landscape services represents only 7 percent of all the U.S. Green Industry establishments, it employed almost 52 percent of all paid employees, 31 percent of total sales. The *Landscape services* sector dominated within the *Horticultural Services* Group, representing 94 percent of the paid employees, 91 percent of annual payroll, 92 percent of industry output, and 95 percent of employment impacts.

Landscape Architectural Services

Table 5-4 presents the economic characteristics and impacts of the *Landscape architectural services* sector. The top five states providing landscape architectural services were California, Florida, Massachusetts, Texas, and New York, with output impacts ranging from $1.7 Billion for California to $288 million for New York. These top five states represented 52 percent of the national total, with combined output impacts of a little over $3.2 Billion. The next five states in terms of importance were Colorado, Illinois, Pennsylvania, New Jersey, and North Carolina. The top 10 states combined represented a total of $4.4 Billion in output impacts, or 72 percent of the U.S. total in this sector. For the total of 48,085 jobs created by the *Landscape architectural services* sector nationally, the top five employment states were California, Florida, Texas, Massachusetts, and Colorado, which accounted for 24,072 jobs or 50 percent of the national total. The states of Pennsylvania, New Jersey, Illinois, North Carolina, and Arizona were the next five highest employer states, adding another 8,941 jobs and when combined with the top five states, represented 69 percent of the national workforce of 33,012 jobs in this sector.

Table 5-2. *Horticultural services* industry group: establishments, employment, payroll, sales, and economic impacts by region and state, 2007

Region / State	Number of establish-ments	Sales (Million$)	Payroll (Million$)	Output Impact (Million$)	Employment (jobs)	Employment Impact (jobs)	Labor Income Impact (Million$)	Value Added Impact (Million$)
Appalachian	**9,031**	**4,935**	**1,667**	**9,047**	**61,247**	**126,900**	**2,962**	**5,280**
Kentucky	923	466	135	772	5,699	10,524	227	440
North Carolina	3,548	1,881	612	3,878	22,508	56,339	1,261	2,265
Tennessee	1,482	810	276	1,450	10,584	19,067	476	850
Virginia	2,810	1,703	622	2,837	21,388	39,344	966	1,664
West Virginia	268	75	22	109	1,068	1,627	32	62
Great Plains	**1,909**	**821**	**256**	**1,235**	**9,086**	**15,372**	**378**	**697**
Kansas	777	476	159	772	5,457	9,517	244	437
Nebraska	703	223	61	295	2,304	3,698	85	167
North Dakota	196	55	15	80	563	1,004	23	44
South Dakota	233	68	20	88	762	1,153	27	49
Midwest	**20,026**	**10,464**	**3,361**	**15,550**	**99,873**	**172,548**	**4,978**	**9,049**
Illinois	4,194	2,804	936	4,297	22,804	41,905	1,406	2,538
Indiana	2,042	1,053	320	1,800	11,022	22,034	552	1,023
Iowa	838	379	113	558	4,084	7,307	170	316
Michigan	3,351	1,551	478	2,194	13,647	22,880	692	1,289
Minnesota	2,002	932	277	945	8,426	8,536	282	552
Missouri	1,905	926	319	1,044	11,564	13,168	354	608
Ohio	3,812	1,844	609	3,054	19,720	36,918	990	1,772
Wisconsin	1,882	976	307	1,658	8,606	19,800	531	952
Mountain	**7,398**	**5,106**	**1,707**	**9,294**	**61,656**	**124,043**	**3,088**	**5,459**
Arizona	1,933	1,694	606	3,113	24,725	45,448	1,080	1,846
Colorado	2,190	1,496	497	2,633	14,613	29,887	869	1,561
Idaho	784	356	112	598	3,987	8,402	192	344
Montana	455	127	35	195	1,204	2,448	57	111
Nevada	800	840	294	1,723	11,266	24,690	588	1,003
Utah	1,002	506	139	894	5,153	11,475	263	518
Wyoming	234	87	24	139	708	1,692	41	77
Northeast	**25,447**	**13,077**	**4,125**	**20,333**	**108,779**	**204,664**	**6,357**	**11,944**
Connecticut	2,052	1,024	313	1,779	7,829	18,266	551	1,033
Delaware	368	246	81	561	2,777	6,811	164	319
District of Columbia	35	24	9	24	180	180	9	16
Maine	621	247	74	506	2,224	6,667	160	291
Maryland	2,100	1,572	548	2,762	16,731	33,746	916	1,627
Massachusetts	3,293	1,824	582	3,023	12,368	27,344	964	1,802
New Hampshire	772	305	97	557	2,751	6,289	175	326
New Jersey	4,500	2,335	728	3,929	19,584	38,253	1,203	2,304
New York	6,191	2,897	899	3,252	21,522	25,966	1,007	1,924
Pennsylvania	4,449	2,249	687	3,184	20,197	32,637	976	1,864
Rhode Island	631	236	70	552	1,557	5,872	167	320
Vermont	435	117	37	205	1,059	2,632	65	117
Pacific	**14,062**	**10,631**	**3,800**	**17,893**	**129,190**	**219,823**	**6,135**	**10,546**
Alaska	155	84	25	99	642	873	30	56
California	9,341	8,306	2,971	14,046	100,944	170,643	4,818	8,310
Hawaii	336	253	96	490	3,169	6,582	173	283
Oregon	1,532	683	248	1,035	9,218	14,342	361	607
Washington	2,698	1,305	460	2,223	15,217	27,383	752	1,290
Southcentral	**7,069**	**4,707**	**1,551**	**5,125**	**60,488**	**66,455**	**1,687**	**3,071**
Arkansas	531	196	68	344	3,050	5,763	115	193
Louisiana	827	351	103	422	4,572	5,740	126	248
New Mexico	369	213	73	225	2,793	2,908	77	134
Oklahoma	792	347	111	406	5,009	5,958	130	238
Texas	4,550	3,600	1,196	3,728	45,064	46,087	1,239	2,258
Southeast	**14,988**	**8,534**	**2,662**	**14,353**	**101,193**	**193,623**	**4,566**	**8,475**
Alabama	1,104	612	199	1,170	7,991	17,666	380	669
Florida	8,594	4,892	1,534	7,646	57,531	99,862	2,457	4,562
Georgia	3,016	1,877	569	2,867	20,303	35,004	888	1,703
Mississippi	541	229	69	416	3,257	6,613	126	232
South Carolina	1,733	924	291	2,254	12,111	34,478	713	1,308
Grand Total	**99,930**	**58,276**	**19,129**	**92,830**	**631,511**	**1,123,428**	**30,151**	**54,521**

Impact estimates include regional multiplier effects.

Table 5-3. *Landscaping services* sector: establishments, employment, payroll, sales, and economic impacts by region and state, 2007

Region / State	Number of Establishments	Sales (Million$)	Output Impact (Million$)	Employment (jobs)	Employment Impact (jobs)	Payroll (Million$)	Labor Income Impact (Million$)	Value Added Impact (Million$)
Appalachian	**8,491**	**4,606**	**8,591**	**58,302**	**122,904**	**1,534**	**2,787**	**4,970**
Kentucky	884	448	753	5,522	10,335	129	220	426
North Carolina	3,304	1,733	3,670	21,247	54,528	551	1,180	2,125
Tennessee	1,379	760	1,373	10,076	18,327	257	448	798
Virginia	2,662	1,592	2,689	20,423	38,124	576	908	1,561
West Virginia	262	73	107	1,034	1,589	21	31	60
Great Plains	**1,871**	**808**	**1,216**	**8,932**	**15,180**	**250**	**371**	**684**
Kansas	756	466	758	5,351	9,376	155	239	427
Nebraska	694	221	293	2,285	3,678	61	84	166
North Dakota	195	54	79	560	1,001	15	22	44
South Dakota	226	66	85	736	1,125	19	26	48
Midwest	**19,061**	**9,977**	**14,870**	**96,131**	**167,274**	**3,191**	**4,744**	**8,586**
Illinois	3,829	2,584	4,034	21,280	40,063	862	1,318	2,352
Indiana	1,963	1,030	1,769	10,829	21,768	312	541	1,002
Iowa	823	375	554	4,044	7,265	112	169	313
Michigan	3,187	1,484	2,048	13,047	21,667	451	638	1,193
Minnesota	1,912	898	900	8,153	8,176	265	265	521
Missouri	1,834	901	1,018	11,280	12,871	310	345	590
Ohio	3,700	1,778	2,962	19,165	36,140	584	956	1,710
Wisconsin	1,813	926	1,585	8,333	19,325	295	512	904
Mountain	**6,814**	**4,699**	**8,740**	**57,888**	**119,132**	**1,536**	**2,867**	**5,077**
Arizona	1,767	1,561	2,957	23,342	43,876	548	1,015	1,737
Colorado	1,950	1,328	2,351	13,221	27,634	423	756	1,368
Idaho	752	341	581	3,865	8,264	106	186	333
Montana	428	115	180	1,107	2,326	31	52	101
Nevada	764	797	1,676	10,859	24,260	277	570	971
Utah	928	475	860	4,846	11,143	128	250	494
Wyoming	225	82	134	648	1,629	23	39	74
Northeast	**23,959**	**12,107**	**18,957**	**102,060**	**195,164**	**3,757**	**5,859**	**10,996**
Connecticut	1,963	981	1,723	7,547	17,898	296	530	995
Delaware	355	234	540	2,676	6,651	77	158	305
District of Columbia	11	4	4	64	64	1	1	2
Maine	592	236	489	2,130	6,523	70	154	281
Maryland	1,955	1,506	2,677	16,108	32,993	520	882	1,568
Massachusetts	3,069	1,595	2,619	10,970	24,785	489	814	1,527
New Hampshire	754	300	550	2,702	6,224	95	173	321
New Jersey	4,247	2,195	3,716	18,614	36,806	681	1,133	2,157
New York	5,768	2,628	2,963	19,802	24,122	800	902	1,721
Pennsylvania	4,222	2,089	2,941	18,940	30,765	625	887	1,698
Rhode Island	611	229	541	1,498	5,782	68	163	312
Vermont	412	109	194	1,009	2,550	34	61	110
Pacific	**12,753**	**9,393**	**15,953**	**119,055**	**204,571**	**3,269**	**5,366**	**9,219**
Alaska	150	83	97	628	855	25	29	55
California	8,346	7,238	12,355	92,246	157,469	2,510	4,146	7,150
Hawaii	299	223	453	2,948	6,300	82	157	259
Oregon	1,421	640	969	8,797	13,722	231	336	562
Washington	2,537	1,210	2,079	14,436	26,226	421	697	1,193
Southcentral	**6,611**	**4,399**	**4,676**	**57,964**	**62,827**	**1,440**	**1,528**	**2,764**
Arkansas	518	193	340	3,015	5,725	67	113	191
Louisiana	771	313	377	4,194	5,302	91	112	218
New Mexico	337	197	198	2,644	2,649	66	66	115
Oklahoma	746	331	388	4,836	5,774	105	124	226
Texas	4,239	3,365	3,372	43,275	43,376	1,110	1,112	2,014
Southeast	**14,127**	**7,920**	**13,658**	**96,564**	**188,292**	**2,411**	**4,287**	**7,986**
Alabama	1,062	595	1,141	7,823	17,398	193	370	651
Florida	8,055	4,452	7,172	54,457	96,488	1,347	2,258	4,226
Georgia	2,838	1,762	2,731	19,383	33,912	526	839	1,607
Mississippi	523	222	408	3,191	6,534	66	124	227
South Carolina	1,649	889	2,205	11,710	33,960	279	697	1,276
Grand Total	**93,687**	**53,910**	**86,661**	**596,896**	**1,075,343**	**17,389**	**27,809**	**50,283**

Impact estimates include regional multiplier effects.

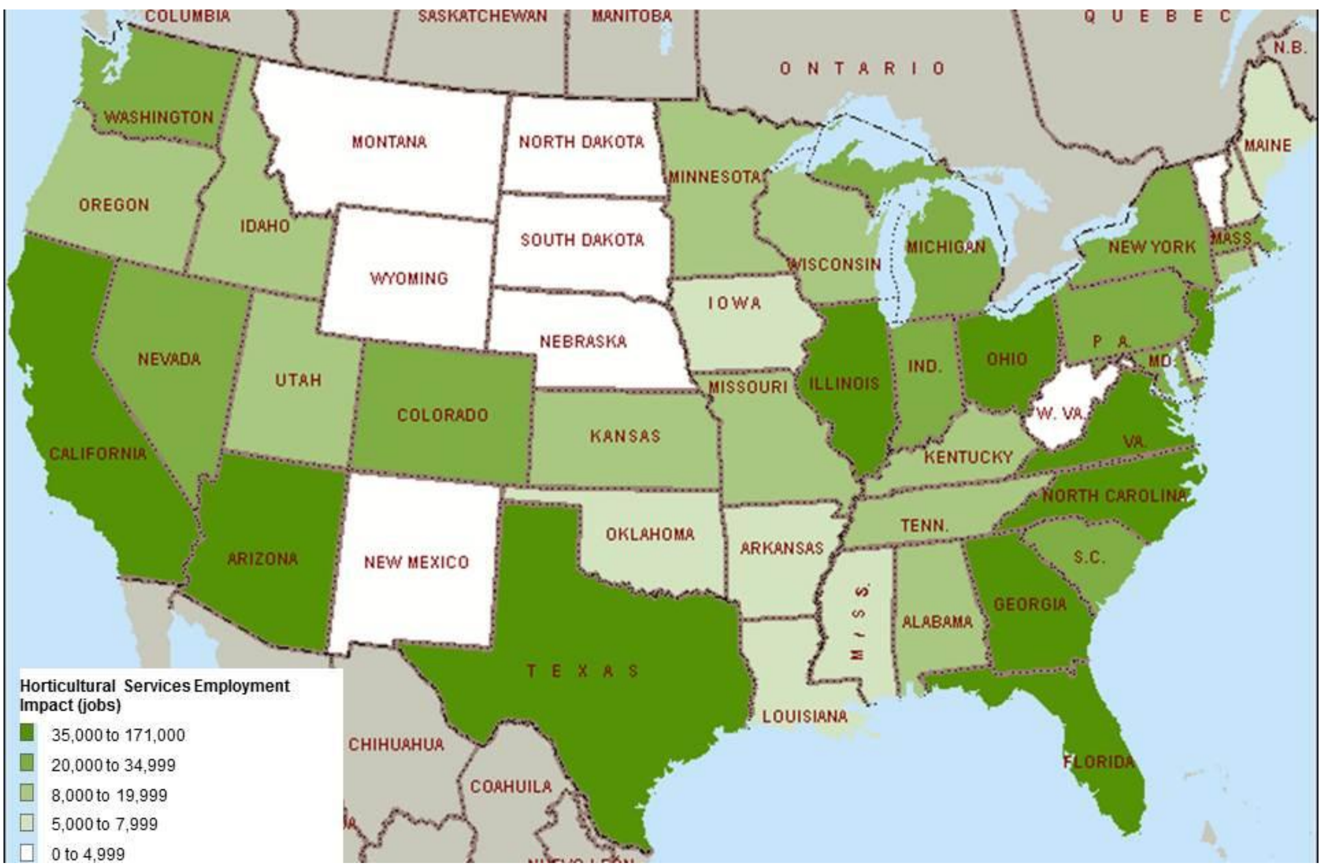
Table 5-4. *Landscape architectural services* sector: establishments, employment, payroll, sales, and economic impacts by region and state, 2007

Region / State	Number of Establishments	Sales (Million$)	Output Impact (Million$)	Employment (jobs)	Employment Impact (jobs)	Payroll (Million$)	Labor Income Impact (Million$)	Value Added Impact (Million$)
Appalachian	**540**	**329**	**455**	**2,945**	**3,996**	**134**	**175**	**309**
Kentucky	39	18	20	177	189	6	6	13
North Carolina	244	148	208	1,261	1,810	61	81	140
Tennessee	103	50	78	508	739	19	28	52
Virginia	148	111	147	965	1,220	47	58	103
West Virginia	6	2	2	34	37	1	1	1
Great Plains	**38**	**14**	**19**	**154**	**192**	**6**	**8**	**12**
Kansas	21	9	14	106	142	4	6	9
Nebraska	9	1	2	19	20	1	1	1
North Dakota	1	0	0	3	3	0	0	0
South Dakota	7	3	3	26	27	1	1	2
Midwest	**965**	**487**	**679**	**3,742**	**5,274**	**169**	**234**	**463**
Illinois	365	220	263	1,524	1,843	74	88	186
Indiana	79	23	31	193	266	8	10	20
Iowa	15	3	4	40	42	1	1	2
Michigan	164	67	146	600	1,213	27	54	96
Minnesota	90	34	45	273	360	13	16	30
Missouri	71	24	26	284	297	9	10	18
Ohio	112	66	92	555	778	25	34	62
Wisconsin	69	50	72	273	475	12	20	47
Mountain	**584**	**407**	**554**	**3,768**	**4,911**	**171**	**221**	**382**
Arizona	166	133	156	1,383	1,572	58	65	108
Colorado	240	168	282	1,392	2,253	74	113	193
Idaho	32	15	16	122	139	5	6	11
Montana	27	12	15	97	122	4	4	10
Nevada	36	43	46	407	430	17	18	32
Utah	74	31	34	307	332	12	13	24
Wyoming	9	4	5	60	63	2	2	3
Northeast	**1,488**	**970**	**1,377**	**6,719**	**9,501**	**368**	**498**	**948**
Connecticut	89	43	55	282	368	16	20	38
Delaware	13	11	22	101	160	4	7	14
District of Columbia	24	20	20	116	116	7	7	14
Maine	29	11	16	94	145	4	6	11
Maryland	145	66	85	623	753	28	34	59
Massachusetts	224	230	404	1,398	2,559	93	150	275
New Hampshire	18	5	7	49	66	2	3	5
New Jersey	253	140	214	970	1,447	47	70	147
New York	423	269	288	1,720	1,844	99	105	203
Pennsylvania	227	160	243	1,257	1,872	63	89	167
Rhode Island	20	7	11	59	90	2	4	7
Vermont	23	8	11	50	83	3	4	7
Pacific	**1,309**	**1,238**	**1,940**	**10,135**	**15,252**	**531**	**769**	**1,328**
Alaska	5	1	2	14	18	1	1	1
California	995	1,068	1,691	8,698	13,174	460	672	1,161
Hawaii	37	29	37	221	282	14	17	25
Oregon	111	44	67	421	620	17	25	44
Washington	161	95	144	781	1,157	39	55	97
Southcentral	**458**	**308**	**449**	**2,524**	**3,629**	**111**	**159**	**307**
Arkansas	13	4	4	35	37	2	2	2
Louisiana	56	37	44	378	437	12	14	30
New Mexico	32	16	28	149	259	6	10	18
Oklahoma	46	16	17	173	184	5	6	12
Texas	311	234	356	1,789	2,711	86	127	244
Southeast	**861**	**613**	**695**	**4,629**	**5,332**	**251**	**278**	**489**
Alabama	42	17	29	168	267	7	11	19
Florida	539	440	474	3,074	3,375	188	199	337
Georgia	178	114	136	920	1,092	42	49	96
Mississippi	18	7	8	66	80	2	3	5
South Carolina	84	35	49	401	518	12	16	33
Grand Total	**6,243**	**4,365**	**6,169**	**34,615**	**48,085**	**1,740**	**2,342**	**4,238**

Impact estimates include regional multiplier effects.

Figure 5-1. Map of value added contributions by the horticultural services sectors of the U.S. Green industry, 2007

Figure 5-2. Map of employment contributions by the horticultural services sectors of the U.S. Green industry, 2007



6. Results for the *Wholesale and Retail Trade* Industry Group

A total of twelve sectors comprise the horticultural *Wholesale and Retail Trade* industry group: 1) *Merchant wholesalers, durable goods*; 2) *Merchant wholesalers, non-durable goods*; 3) W*holesale electronic markets and agents and brokers*; 4) *Building material and garden equipment and supplies dealers*; 5) *Electronics and appliance stores*; 6) *Food and beverage stores*; 7) *Furniture and home furnishings stores*; 8) *Gasoline stations*; 9) *General merchandise stores*; 10) *Health and personal care stores*; 11) *Non-store retailers*; and 12) *Sporting goods, hobby, book, and music stores*. The first three sectors are wholesale establishments that distribute horticultural products to retailers and end-users, including plant material, chemical and fertilizer supplies, and various types of lawn and garden equipment. Retail lawn and garden supply stores are independent and chain stores that sell primarily horticultural goods to end consumers. This sector includes retail building materials and supply stores or home improvement centers, such as Lowe's, Home Depot, and Ace Hardware, which have lawn and garden departments. General merchandise stores, includes large chain stores such as Wal-Mart and Target, also typically have lawn and garden sections. Retail food and beverage stores focus mostly on food items, but increasingly also have extensive floral departments and seasonal landscape plant material. Other types of retailers, such as electronic stores, furniture stores, health and personal care stores, and sporting goods stores may offer horticultural goods as a minor sideline. Non-store retailers offer horticultural goods for sales through the internet or mail order.

Table 6-1 presents summary information on the number of establishments, output, employees, annual payroll, and economic impact results for all sectors in the U.S. horticultural *Wholesale and Retail Trade* industry group. There were over 1.27 Million business establishments in this industry group, with direct employment of 292,962 jobs, sales of $23.74 Billion, and a total payroll of $7.97 Billion. This industry group had $29.86 Billion in output impacts, employment impacts of 292,962 jobs, value added impacts of 20.51 Billion, and labor income impacts of 9.87 Billion. These impacts represented 17 to 19 percent of total economic impacts for the U.S. Green Industry at large. Of the twelve sectors comprising the *Wholesale and Retail Trade* Group, *Building material and garden equipment and supplies dealers* sector were the most prominent, comprising 47 percent of output and value added impacts and 53 percent of all jobs. *Merchant wholesalers of durable goods*, *General merchandise stores,* and *Merchant wholesalers of non-durable goods* were the next most important sectors in terms of economic impacts. These four sectors combined contributed 74 percent of all economic impacts within the *Wholesale and Retail Trade* industry group. Maps of value added impacts and employment impacts in each state are shown in Figures 6-1 and 6-2.

Merchant Wholesalers

Economic impacts of the *Merchant wholesaler* sector by region and state are presented in Table 6-2. Nationally, there were nearly 435,000 firms involved in wholesaling of horticultural goods which generated $4.44 Billion of sales, direct employment of 22,955 jobs, total payroll on $1.19 Billion, total employment impacts of 37,715 jobs, $6.49 Billion in output impacts, $4.49 Billion in total value added impacts, and $1.81 Billion in labor income impacts. In terms of output and employment impacts, the top five states for this sector were Florida, California, Ohio, Illinois, and Georgia. Together these states accounted for 33 percent of all establishment, and 39 to 42 percent of sales, output, employment and value added impacts in this sector. The next five states in terms of importance were North Carolina, New York, New Jersey, and Washington. These top 10 producing states combined accounted for 57 percent of establishments, 61 percent of sales, and 62 to 64 percent of employment, labor income and value added impacts in this sector.

Building Material and Garden Equipment and Supplies Dealers

Table 6-3 presents number of establishments, sales, employment, payroll, and state-level economic impact results for the *Building material and garden equipment and supplies dealers* sector. In addition to independent retail lawn and garden stores, this sector includes home improvement stores such as Lowe's and Home Depot that also have sizable lawn and garden supply departments. A total of 91,070 firms were active in this area with total sales of $11.90 Billion in 2007 and direct employment of 163,458 jobs. Nationally, this sector generated $14.1 Billion in output impacts, $9.7 Billion in value added impacts, and generated 163,458 jobs. These figures represent roughly 47 percent of output and value added impacts, and 53 percent of total employment impacts for the *Wholesale and Retail Trade* Group, making it the largest sector within this industry group. The top five states were California, Texas, Florida, Georgia, and North Carolina, and these top tier states contributed over one quarter of total U.S. economic impacts for the sector. The second tier of five states included Illinois, New York, Ohio, Michigan, and Pennsylvania, and these states contributed an additional 18 percent share of economic impacts. So the top 10 states comprised roughly half of the total impacts in this sector.

General Merchandise Stores

Table 6-4 presents number of establishments, sales, employment, payroll, and information on state level economic impacts for the retail *General merchandise stores* sector. This sector, including big box stores like Wal-Mart and Target, had a total of 45,855 establishments, total sales of $1.95 Billion in horticultural products, direct employment of 36,366 jobs and $$711 Million in employee payroll attributable to horticulture business. Nationally, output impacts were estimated at $2.2 Billion, value added impacts at $1.5 Billion, and total employment impacts at 39,433 jobs. These stores accounted for approximately 7 percent of total output and value added impacts, and 10 percent of total employment impacts of the *Wholesale and Retail Trade* Group. The top five states were Oklahoma, Arkansas, California, Texas, and Florida, representing 34 percent of each of output, value added, and employment impacts in this sector. The second tier top five states were Illinois, Michigan, Washington, Pennsylvania, and Ohio, comprising an additional 17 percent. Therefore, the top 10 states were responsible for 51 percent of all economic impacts of this sector.

Food and Beverage Stores

State level economic characteristics and impacts of U.S. retail *Food and beverage stores* are presented in Table 6-5. This sector had total sales of $706 Million in horticultural products and direct employment of 12,785 at 146,084 store locations in the U.S. in 2007. Total output impacts were $823 Million, value added impacts were $567 Million, and employment impacts were 14,074 jobs. The top five states in terms of economic impacts were California, Florida, New York, Texas and Pennsylvania, and these states accounted for 39 to 40 percent of total output, value added and employment impacts for this sector. The second tier of five states included Washington, Arizona, Colorado, Massachusetts, and Maryland, which contributed an additional 15 percent share of economic impacts. The top 10 states comprised 53 to 56 percent of total economic impacts in this sector.

Non-Store Retailers

Table 6-6 presents information on the number of establishments, sales, employment, and payroll and state level economic impacts for the *Non-store retailers* sector. There were 59,375 non-store retailers, with total sales exceeding $1.45 Billion and direct employment of 7,408 jobs. This sector had total output impacts of $1.88 Billion, employment impacts of 12,170 jobs, value added impacts of $1.28 Billion and labor income impacts of $409 Million. The top five states were Illinois, New York, California, Ohio, and Indiana representing 44 percent of total output and value added impacts, and 40 percent of employment impacts. The second tier of five states were Oregon, Massachusetts, New Hampshire, Nevada, and Texas, adding an additional 16 percent, so the top 10 states together produced more than 6o percent of output, value added and employment impacts for this sector.

Miscellaneous Store Retailers

There were 121,911 miscellaneous store retailers, with total sales of $3.07 Billion in horticultural products, and direct employment of 47,175 jobs, as shown in Table 6-7. Nationally, this sector contributed $4.05 Billion to output impacts, generated employment impacts of 59,829 jobs, total value added impacts of $2.75 Billion, and labor income impacts of $1.18 Billion. The top five states in this sector were Oklahoma, Arkansas, California, New York, and Texas, accounting for 50 to 59 percent of total economic impacts in this sector. Among the second tier of states in this sector, Florida and Pennsylvania had total output impacts of more than $100 Million.

All Other Retail Stores

Table 6-8 presents information on state level economic impacts for all the other retail stores with relatively minor business in horticultural products, including *Electronic and appliance stores*, *Furniture and home furnishing stores*, *Gasoline stations*, *Health and personal care stores*, and *Sporting goods, hobby, book, and music stores*. There were 380,570 of these stores, with total sales of $218 Million in horticultural goods, and 2,815 direct employees. Total output impacts were $271 Million, employment impacts were 3,455 jobs, total value added impacts were $185 Million, and labor income impacts were $80 Million. The top six states were California, Texas, Georgia, New Jersey, Arkansas, and Montana, which represented more than one third of total economic impacts although accounting for only one quarter of all of the establishments in the U.S.

Table 6-1. *Wholesale and retail trade industry group*: establishments, employment, payroll, sales, and economic impacts by region and state, 2007

Region / State	Number establishments	Payroll (Million$)	Sales (Million$)	Output Impact (Million$)	Employment (jobs)	Employment Impact (jobs)	Labor Income Impact (Million$)	Value Added Impact (Million$)
Appalachian	**118,833**	**818**	**2,295**	**2,781**	**29,232**	**34,448**	**966**	**1,918**
Kentucky	16,949	111	315	412	4,401	5,597	140	280
North Carolina	39,442	306	866	1,079	9,790	12,066	372	746
Tennessee	25,477	163	466	581	5,971	7,157	198	401
Virginia	29,930	205	553	599	7,659	8,039	219	416
West Virginia	7,035	33	95	109	1,411	1,589	37	75
Great Plains	**31,166**	**209**	**654**	**817**	**8,336**	**10,432**	**259**	**554**
Kansas	13,279	73	209	254	2,966	3,495	86	173
Nebraska	9,100	78	238	282	3,044	3,630	92	191
North Dakota	4,115	34	120	168	1,391	2,010	49	113
South Dakota	4,672	24	87	113	935	1,297	32	77
Midwest	**254,707**	**1,652**	**4,897**	**6,556**	**62,918**	**80,500**	**2,165**	**4,478**
Illinois	52,614	374	1,252	1,444	13,478	14,941	432	1,002
Indiana	26,042	189	543	706	7,449	9,497	239	482
Iowa	15,013	80	244	347	3,137	4,488	112	234
Michigan	41,085	210	582	841	8,583	11,543	292	572
Minnesota	24,639	184	517	707	6,513	8,613	243	481
Missouri	25,856	174	491	628	6,667	8,213	214	429
Ohio	45,872	286	840	1,286	11,039	14,999	423	873
Wisconsin	23,586	155	430	598	6,051	8,206	208	406
Mountain	**78,318**	**504**	**1,410**	**1,862**	**18,131**	**23,281**	**648**	**1,278**
Arizona	21,306	139	383	488	5,288	6,265	172	337
Colorado	22,158	143	378	486	4,822	5,930	177	335
Idaho	6,889	34	97	151	1,355	2,079	51	102
Montana	5,498	34	101	175	1,361	2,412	58	118
Nevada	9,071	61	182	197	2,103	2,242	66	137
Utah	10,298	74	208	296	2,514	3,554	101	202
Wyoming	3,098	19	59	68	688	799	22	46
Northeast	**278,279**	**1,556**	**4,442**	**5,255**	**52,702**	**59,831**	**1,797**	**3,610**
Connecticut	15,079	118	331	404	3,768	4,413	141	277
Delaware	3,937	32	103	164	1,080	1,664	49	110
District of Columbia	1,831	12	30	30	418	419	12	20
Maine	7,017	35	100	137	1,301	1,795	47	94
Maryland	20,839	153	427	485	5,326	5,791	170	336
Massachusetts	28,201	174	452	541	5,768	6,545	201	370
New Hampshire	6,890	59	166	265	1,872	2,844	88	179
New Jersey	42,113	233	637	801	7,493	8,696	281	552
New York	93,140	403	1,248	1,352	12,830	13,533	433	927
Pennsylvania	50,804	283	789	837	10,954	11,407	297	585
Rhode Island	4,572	27	81	122	978	1,390	39	82
Vermont	3,856	27	80	115	915	1,335	38	78
Pacific	**198,394**	**1,108**	**3,184**	**3,698**	**37,414**	**42,422**	**1,269**	**2,570**
Alaska	2,808	15	44	70	522	825	23	47
California	145,592	757	2,147	2,373	25,448	27,425	828	1,659
Hawaii	5,167	30	86	105	1,114	1,340	36	72
Oregon	17,348	108	336	421	3,803	4,723	134	289
Washington	27,479	199	571	729	6,527	8,109	248	502
Southcentral	**142,313**	**1,104**	**3,662**	**4,582**	**46,879**	**58,190**	**1,394**	**3,144**
Arkansas	12,346	248	901	1,187	11,699	15,577	337	801
Louisiana	18,300	108	317	371	4,060	4,674	125	256
New Mexico	7,444	30	84	101	1,166	1,394	35	70
Oklahoma	14,833	282	1,031	1,408	13,279	18,227	403	958
Texas	89,390	436	1,329	1,515	16,675	18,316	494	1,058
Southeast	**177,838**	**1,022**	**3,195**	**4,304**	**37,352**	**48,411**	**1,368**	**2,958**
Alabama	20,123	116	337	477	4,563	6,257	160	324
Florida	85,733	464	1,506	1,892	16,569	19,792	585	1,313
Georgia	40,972	247	767	1,160	8,843	12,732	368	791
Mississippi	12,190	72	218	269	2,834	3,525	88	184
South Carolina	18,820	123	366	504	4,543	6,104	166	345
Grand Total	**1,279,848**	**7,974**	**23,740**	**29,856**	**292,962**	**357,515**	**9,866**	**20,511**

Impact estimates include regional multiplier effects.

Figure 6-1. Map of value added contributions by the wholesale and retail trade sectors of the U.S. Green industry, 2007

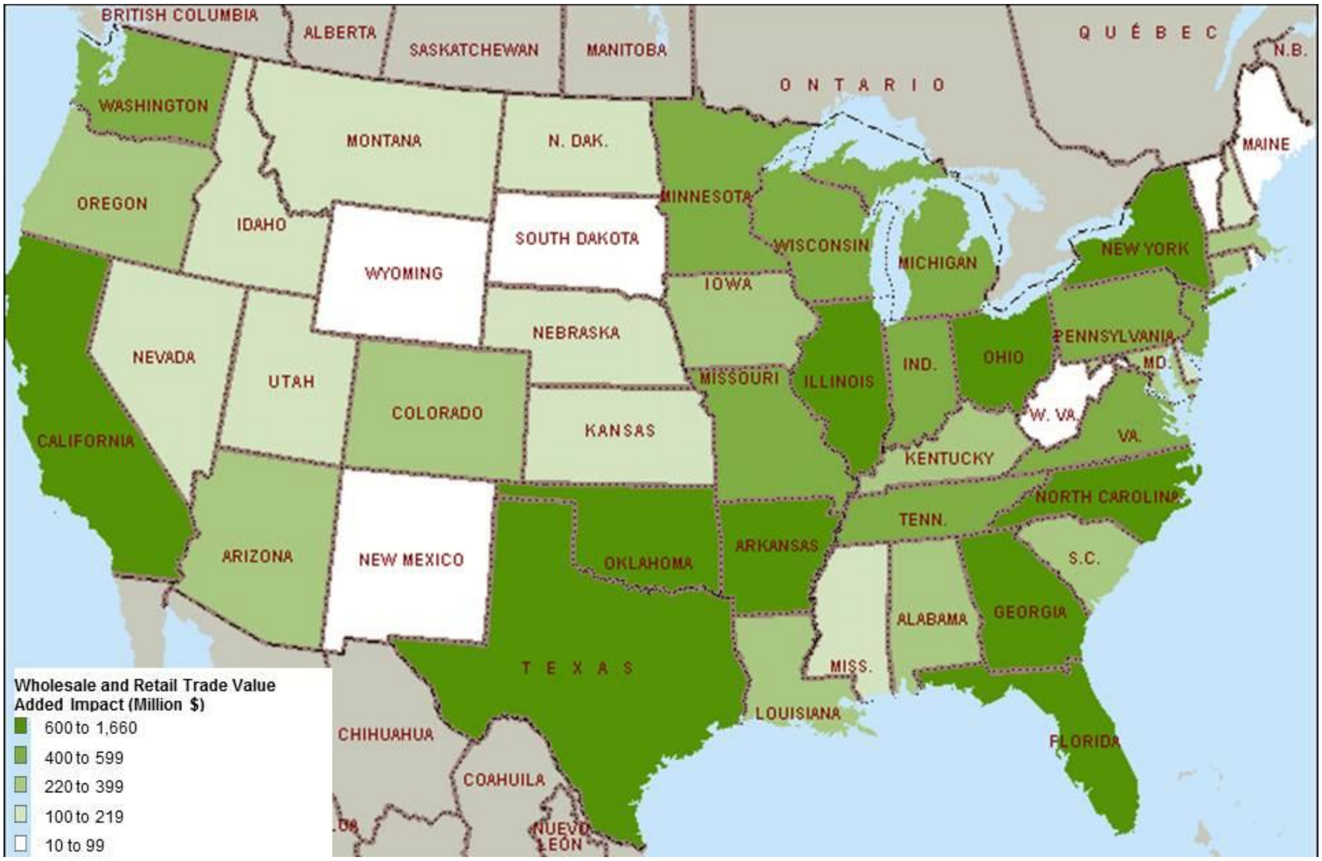


Figure 6-2. Map of employment contributions by the wholesale and retail trade sectors of the U.S. Green industry, 2007

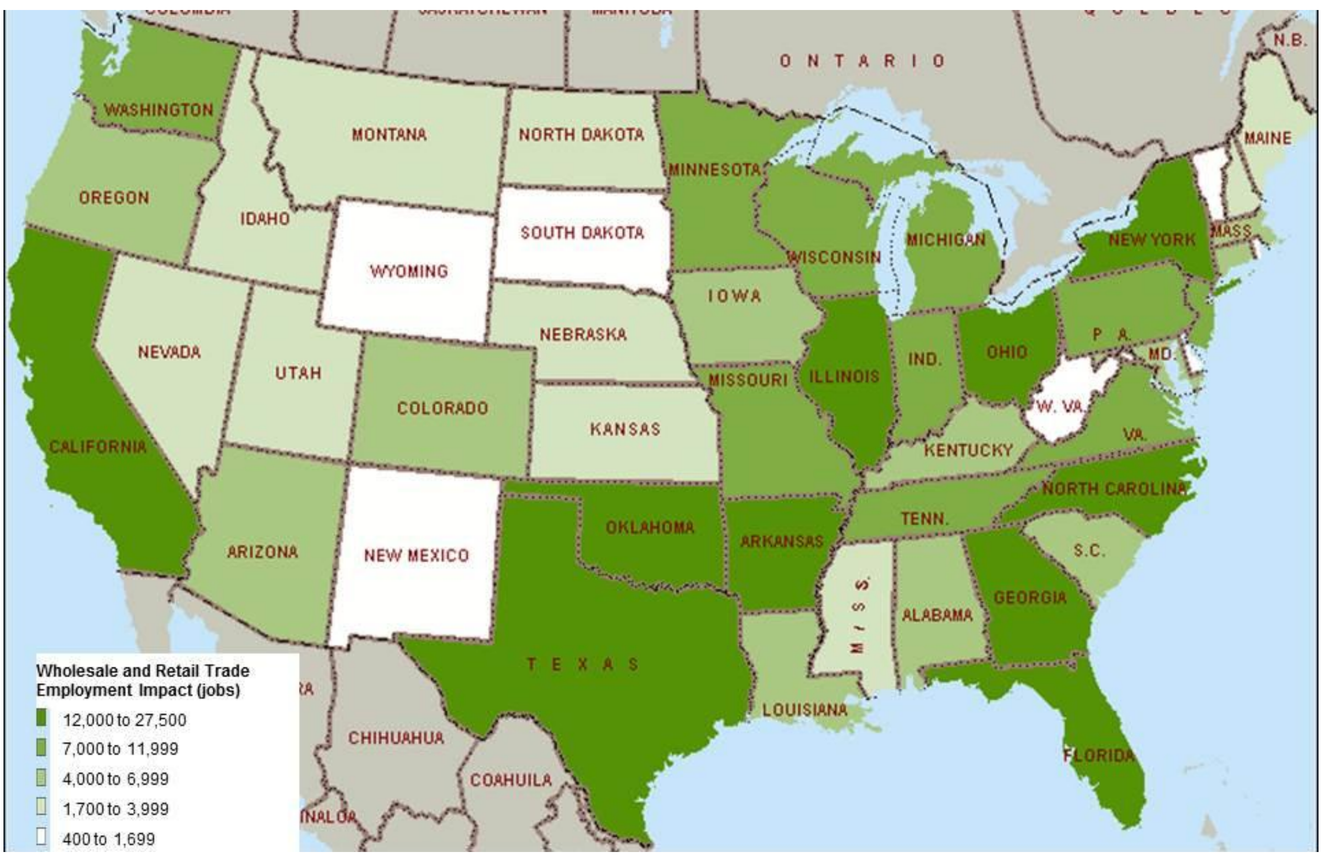


Table 6-2. *Merchant wholesaler* sectors: establishments, employment, payroll, sales, and economic impacts by region and state, 2007

Region / State	Number of establishments	Sales (Million$)	Output Impact (Million$)	Employment (jobs)	Employment Impact (jobs)	Payroll (Million$)	Labor income Impact (Million$)	Value Added Impact (Million$)
Appalachian	**33,474**	**482**	**606**	**2,933**	**3,866**	**155**	**193**	**424**
Kentucky	4,485	25	30	89	122	4	5	21
North Carolina	12,256	306	376	1,990	2,523	109	130	263
Tennessee	7,413	81	95	421	527	21	25	67
Virginia	7,740	63	97	386	636	20	30	67
West Virginia	1,580	7	9	47	58	2	2	6
Great Plains	**10,587**	**97**	**118**	**594**	**753**	**27**	**33**	**82**
Kansas	4,544	48	56	262	324	12	15	40
Nebraska	3,093	26	30	182	215	8	10	21
North Dakota	1,525	7	13	56	101	2	4	9
South Dakota	1,425	15	18	94	113	4	5	12
Midwest	**84,892**	**959**	**1,560**	**4,744**	**9,114**	**247**	**431**	**1,069**
Illinois	20,062	268	412	1,015	1,979	58	102	284
Indiana	8,147	78	92	422	531	20	24	65
Iowa	5,017	54	63	351	421	15	18	44
Michigan	12,047	81	125	320	632	16	30	86
Minnesota	8,623	117	161	603	930	39	52	112
Missouri	8,338	81	95	519	624	25	29	67
Ohio	15,332	189	504	931	3,292	46	142	335
Wisconsin	7,326	93	109	582	705	29	34	77
Mountain	**25,430**	**238**	**349**	**1,394**	**2,217**	**70**	**105**	**241**
Arizona	7,045	77	131	429	825	22	38	90
Colorado	7,290	64	94	319	530	18	27	65
Idaho	2,103	10	13	63	84	3	4	9
Montana	1,461	9	15	68	110	3	4	10
Nevada	3,046	11	19	61	122	3	5	13
Utah	3,659	60	71	426	506	21	24	50
Wyoming	826	6	7	29	40	1	2	5
Northeast	**93,242**	**658**	**1,027**	**3,249**	**5,649**	**187**	**295**	**706**
Connecticut	4,620	53	80	187	370	12	20	55
Delaware	983	13	26	74	157	4	7	17
District of Columbia	416	3	3	22	22	2	2	2
Maine	1,629	8	12	58	86	2	4	8
Maryland	5,997	59	99	336	601	18	30	68
Massachusetts	8,765	50	79	251	424	16	24	54
New Hampshire	1,886	20	38	125	252	8	13	26
New Jersey	16,174	133	254	532	1,307	35	71	172
New York	34,672	187	274	898	1,443	50	75	189
Pennsylvania	15,769	119	141	675	828	36	43	99
Rhode Island	1,479	7	13	42	80	2	4	9
Vermont	852	6	10	50	79	2	3	7
Pacific	**79,580**	**690**	**853**	**3,632**	**4,757**	**191**	**241**	**599**
Alaska	753	2	3	16	19	1	1	2
California	61,451	476	580	2,442	3,145	134	166	408
Hawaii	1,844	10	13	88	108	3	4	9
Oregon	5,789	64	84	316	461	16	22	59
Washington	9,743	137	174	769	1,024	37	48	122
Southcentral	47,633	359	499	1,662	2,683	85	128	346
Arkansas	3,501	47	55	258	319	12	15	39
Louisiana	5,614	34	49	218	328	10	15	34
New Mexico	2,036	8	9	50	60	2	2	6
Oklahoma	4,584	62	72	349	433	17	20	51
Texas	31,898	208	313	787	1,543	44	76	216
Southeast	60,145	958	1,484	4,747	8,677	224	387	1,023
Alabama	5,663	50	69	285	427	13	18	48
Florida	32,361	552	862	2,755	5,068	125	222	595
Georgia	14,165	235	387	952	2,081	52	99	265
Mississippi	2,922	23	27	167	197	7	8	19
South Carolina	5,034	97	138	589	904	27	40	96
Grand Total	**434,983**	**4,439**	**6,495**	**22,955**	**37,715**	**1,186**	**1,812**	**4,491**

Impact estimates include regional multiplier effects.

Table 6-3. Building material and garden equipment and supplies dealers: establishments, employment, payroll, sales, and economic impacts by region and state, 2007

Region / State	Number of establishments	Sales (Million$)	Output Impact (Million$)	Employment (jobs)	Employment Impact (jobs)	Payroll (Million$)	Labor income Impact (Million$)	Value Added Impact (Million$)
Appalachian	**9,475**	**1,368**	**1,658**	**18,489**	**21,955**	**516**	**605**	**1,138**
Kentucky	1,571	226	305	3,199	4,197	86	110	207
North Carolina	3,113	423	548	5,543	7,070	153	193	375
Tennessee	2,076	303	379	4,070	4,888	114	137	261
Virginia	2,091	358	358	4,829	4,829	140	140	249
West Virginia	624	59	68	848	972	22	24	46
Great Plains	**3,022**	**406**	**522**	**5,593**	**7,178**	**142**	**178**	**352**
Kansas	1,190	125	153	1,967	2,329	48	56	104
Nebraska	951	165	200	2,208	2,697	58	69	135
North Dakota	405	78	110	894	1,331	23	33	74
South Dakota	476	38	58	523	820	13	20	39
Midwest	**20,453**	**2,564**	**3,318**	**37,708**	**47,224**	**1,009**	**1,243**	**2,259**
Illinois	3,352	519	519	7,639	7,639	208	208	363
Indiana	2,294	311	421	4,563	5,994	121	155	286
Iowa	1,508	150	236	1,962	3,125	51	78	157
Michigan	3,157	333	477	5,253	7,025	140	186	323
Minnesota	2,142	281	396	3,900	5,300	109	145	267
Missouri	2,320	319	423	4,590	5,814	119	149	287
Ohio	3,567	419	478	6,342	7,065	169	187	331
Wisconsin	2,113	233	368	3,459	5,260	91	134	246
Mountain	**5,977**	**783**	**1,027**	**11,026**	**14,140**	**313**	**391**	**703**
Arizona	1,367	210	244	3,197	3,577	86	96	169
Colorado	1,642	225	280	3,024	3,650	93	110	193
Idaho	709	59	99	848	1,391	23	36	66
Montana	672	68	124	919	1,740	25	43	83
Nevada	542	92	94	1,310	1,332	38	38	65
Utah	763	102	156	1,373	2,038	39	56	105
Wyoming	282	27	31	356	412	10	12	21
Northeast	**17,936**	**2,187**	**2,374**	**28,662**	**30,696**	**899**	**955**	**1,636**
Connecticut	1,184	162	189	2,092	2,363	72	80	129
Delaware	335	56	86	691	993	21	29	58
District of Columbia	44	2	2	31	31	1	1	2
Maine	632	59	81	826	1,139	24	31	55
Maryland	1,267	241	241	3,060	3,060	96	96	168
Massachusetts	1,901	238	259	3,023	3,229	105	111	177
New Hampshire	641	78	130	1,115	1,652	35	50	87
New Jersey	2,363	321	324	4,042	4,071	136	137	226
New York	5,112	518	518	6,614	6,614	207	207	355
Pennsylvania	3,786	445	445	6,257	6,257	174	174	311
Rhode Island	293	31	47	425	588	13	18	31
Vermont	378	37	54	484	696	15	20	36
Pacific	**11,666**	**1,635**	**1,733**	**21,947**	**23,049**	**651**	**682**	**1,210**
Alaska	196	14	24	199	320	6	9	16
California	7,843	1,134	1,134	15,275	15,275	450	450	797
Hawaii	291	40	42	472	491	14	14	29
Oregon	1,316	158	173	2,061	2,236	60	65	120
Washington	2,020	289	361	3,940	4,728	121	144	248
Southcentral	**10,256**	**1,349**	**1,388**	**18,113**	**18,630**	**487**	**500**	**972**
Arkansas	1,130	145	145	1,992	1,992	51	51	100
Louisiana	1,475	212	242	2,735	3,124	76	85	167
New Mexico	590	51	61	737	865	20	23	42
Oklahoma	1,286	142	142	1,938	1,938	51	51	100
Texas	5,775	797	797	10,711	10,711	290	290	563
Southeast	**12,285**	**1,604**	**2,099**	**21,920**	**27,968**	**591**	**747**	**1,436**
Alabama	1,661	215	313	2,930	4,184	79	110	211
Florida	5,249	639	698	8,757	9,460	238	257	486
Georgia	2,793	392	608	5,424	7,897	147	215	412
Mississippi	1,065	156	194	2,025	2,548	54	65	132
South Carolina	1,517	202	287	2,784	3,879	74	100	195
Grand Total	**91,070**	**11,896**	**14,121**	**163,458**	**190,839**	**4,609**	**5,300**	**9,706**

Impact estimates include regional multiplier effects.

Table 6-4. *General merchandise stores*: establishments, employment, payroll, sales, and economic impacts by region and state, 2007

Region / State	Number of establishments	Sales (Million$)	Output Impact (Million$)	Employment (jobs)	Employment Impact (jobs)	Payroll (Million$)	Labor income Impact (Million$)	Value Added Impact (Million$)
Appalachian	**5,857**	**172**	**174**	**3,255**	**3,270**	**63**	**63**	**121**
Kentucky	946	28	28	548	548	10	10	20
North Carolina	1,860	52	52	998	998	19	19	37
Tennessee	1,282	35	36	661	677	13	13	25
Virginia	1,284	46	46	826	826	16	16	32
West Virginia	485	11	11	221	221	4	4	8
Great Plains	**1,110**	**37**	**43**	**751**	**833**	**14**	**16**	**29**
Kansas	486	17	19	326	349	6	7	13
Nebraska	353	12	14	257	277	5	5	9
North Dakota	120	5	7	103	127	2	2	5
South Dakota	151	3	4	65	80	1	2	3
Midwest	**10,012**	**389**	**443**	**7,761**	**8,441**	**141**	**158**	**306**
Illinois	1,844	92	92	1,826	1,826	34	34	64
Indiana	1,133	49	55	946	1,028	17	19	38
Iowa	596	20	24	410	463	7	9	16
Michigan	1,746	63	85	1,167	1,435	21	28	58
Minnesota	715	29	38	600	710	11	14	26
Missouri	1,047	30	30	600	600	12	12	21
Ohio	2,067	63	71	1,286	1,387	23	26	49
Wisconsin	864	43	48	926	991	16	18	33
Mountain	**2,380**	**108**	**157**	**1,875**	**2,481**	**39**	**54**	**106**
Arizona	789	30	34	528	577	10	12	23
Colorado	560	27	43	478	666	10	15	29
Idaho	249	16	24	277	384	5	8	16
Montana	141	5	9	83	148	2	3	6
Nevada	233	10	10	161	161	4	4	7
Utah	316	17	32	283	468	6	11	22
Wyoming	92	4	4	65	76	1	2	3
Northeast	**8,117**	**285**	**344**	**5,286**	**5,903**	**103**	**121**	**235**
Connecticut	364	18	19	301	310	6	7	13
Delaware	143	6	8	105	128	2	3	6
District of Columbia	32	8	8	152	152	3	3	5
Maine	241	8	13	154	216	3	4	9
Maryland	692	31	36	548	607	10	12	25
Massachusetts	638	30	36	540	601	11	13	24
New Hampshire	200	13	21	217	303	4	7	14
New Jersey	1,049	36	59	632	857	13	20	40
New York	2,520	60	60	1,108	1,108	22	22	41
Pennsylvania	2,018	69	72	1,395	1,435	25	26	50
Rhode Island	119	5	8	92	128	2	3	5
Vermont	101	2	4	42	59	1	1	2
Pacific	**4,271**	**217**	**308**	**3,481**	**4,482**	**75**	**104**	**210**
Alaska	91	6	10	72	124	2	3	7
California	3,087	119	162	1,952	2,403	41	55	111
Hawaii	103	5	8	67	104	2	3	5
Oregon	414	37	54	620	819	13	18	37
Washington	576	50	74	769	1,031	17	25	50
Southcentral	**6,657**	**521**	**523**	**9,744**	**9,770**	**193**	**194**	**365**
Arkansas	688	171	171	3,266	3,266	64	64	118
Louisiana	973	30	30	535	535	11	11	21
New Mexico	326	10	12	166	192	3	4	8
Oklahoma	785	195	195	3,727	3,727	73	73	136
Texas	3,885	117	117	2,050	2,050	42	42	82
Southeast	**7,451**	**225**	**228**	**4,213**	**4,252**	**84**	**85**	**160**
Alabama	1,235	30	34	600	639	12	13	23
Florida	2,494	101	101	1,826	1,826	37	37	71
Georgia	1,797	49	49	916	916	18	18	34
Mississippi	871	19	19	366	366	7	7	13
South Carolina	1,054	27	27	506	506	10	10	19
Grand Total	**45,855**	**1,955**	**2,220**	**36,366**	**39,433**	**711**	**794**	**1,532**

Impact estimates include regional multiplier effects.

Table 6-5. *Food and beverage stores*: establishments, employment, payroll, sales, and economic impacts by region and state, 2007

Region / State	Number of establishments	Sales (Million$)	Output Impact (Million$)	Employment (jobs)	Employment Impact (jobs)	Payroll (Million$)	Labor income Impact (Million$)	Value Added Impact (Million$)
Appalachian	**11,927**	**45**	**45**	**813**	**813**	**15**	**15**	**31**
Kentucky	1,704	3	3	59	59	1	1	2
North Carolina	3,614	13	13	239	239	4	4	9
Tennessee	2,349	7	7	137	137	2	2	5
Virginia	3,552	20	20	354	354	7	7	14
West Virginia	708	1	1	24	24	0	0	1
Great Plains	**2,957**	**11**	**12**	**246**	**252**	**4**	**4**	**8**
Kansas	1,383	6	6	107	107	2	2	4
Nebraska	779	4	4	89	94	1	1	3
North Dakota	356	1	1	21	21	0	0	1
South Dakota	439	1	1	29	30	0	0	1
Midwest	**27,485**	**114**	**118**	**2,263**	**2,309**	**39**	**40**	**82**
Illinois	5,992	22	22	362	362	7	7	15
Indiana	2,551	12	12	242	242	4	4	9
Iowa	999	6	8	153	174	2	3	5
Michigan	5,801	20	20	418	418	7	7	14
Minnesota	2,500	11	13	249	268	4	5	9
Missouri	2,166	8	8	163	163	3	3	6
Ohio	5,321	22	22	432	432	8	8	16
Wisconsin	2,155	12	12	245	250	4	4	9
Mountain	**7,060**	**65**	**76**	**1,175**	**1,299**	**24**	**28**	**53**
Arizona	1,794	26	32	543	609	10	12	22
Colorado	2,448	25	28	397	434	9	10	20
Idaho	523	1	1	16	20	0	0	1
Montana	447	1	1	23	25	0	1	1
Nevada	868	6	6	90	90	2	2	4
Utah	699	4	6	83	98	1	2	4
Wyoming	281	1	1	24	24	0	0	1
Northeast	**42,793**	**195**	**233**	**3,530**	**3,923**	**71**	**83**	**159**
Connecticut	2,099	20	26	338	404	7	9	18
Delaware	581	2	2	34	34	1	1	2
District of Columbia	492	1	1	20	20	1	1	1
Maine	801	0	0	4	6	0	0	0
Maryland	3,356	21	27	335	399	8	9	18
Massachusetts	4,607	21	28	409	477	8	10	19
New Hampshire	703	1	2	23	27	0	1	1
New Jersey	6,927	37	46	617	702	14	16	31
New York	15,437	57	57	1,086	1,086	21	21	39
Pennsylvania	6,581	30	38	586	682	10	13	26
Rhode Island	663	3	3	49	49	1	1	2
Vermont	546	1	2	29	38	1	1	1
Pacific	**23,098**	**134**	**179**	**2,049**	**2,527**	**49**	**64**	**122**
Alaska	400	3	4	52	63	1	2	3
California	16,574	92	123	1,401	1,726	34	44	84
Hawaii	682	5	7	91	116	2	3	5
Oregon	2,282	9	11	148	174	3	4	8
Washington	3,160	24	33	356	449	9	12	22
Southcentral	**13,724**	**57**	**60**	**1,011**	**1,049**	**18**	**19**	**42**
Arkansas	1,128	1	1	26	26	0	0	1
Louisiana	2,013	5	6	113	121	2	2	4
New Mexico	543	4	4	66	66	1	1	2
Oklahoma	1,363	2	2	46	46	1	1	2
Texas	8,677	44	47	759	789	14	15	33
Southeast	**17,040**	**84**	**101**	**1,696**	**1,901**	**31**	**36**	**70**
Alabama	1,698	5	5	101	101	2	2	3
Florida	8,461	53	65	1,073	1,223	20	25	45
Georgia	3,818	18	19	337	352	6	6	13
Mississippi	1,235	1	1	16	16	0	0	1
South Carolina	1,828	8	11	169	208	3	4	8
Grand Total	**146,084**	**706**	**823**	**12,785**	**14,074**	**252**	**288**	**567**

Impact estimates include regional multiplier effects.

Table 6-6. *Non-store retailers*: establishments, employment, payroll, sales, and economic impacts by region and state, 2007

Region / State	Number of establishments	Sales (Million$)	Output Impact (Million$)	Employment (jobs)	Employment Impact (jobs)	Payroll (Million$)	Labor income Impact (Million$)	Value Added Impact (Million$)
Appalachian	**5,269**	**35**	**47**	**273**	**417**	**9**	**12**	**32**
Kentucky	702	5	5	50	54	1	2	3
North Carolina	1,858	21	29	157	255	5	8	20
Tennessee	1,033	4	5	25	46	1	1	4
Virginia	1,417	5	6	30	47	1	1	4
West Virginia	259	1	2	11	15	0	0	1
Great Plains	**1,544**	**64**	**71**	**349**	**449**	**10**	**13**	**48**
Kansas	627	1	1	5	10	0	0	1
Nebraska	458	22	23	111	130	3	4	16
North Dakota	211	19	23	139	197	4	5	16
South Dakota	248	22	24	93	112	3	3	16
Midwest	**11,947**	**465**	**594**	**2,178**	**3,702**	**83**	**123**	**405**
Illinois	2,337	252	299	741	1,233	35	49	206
Indiana	1,170	52	69	456	683	14	19	47
Iowa	677	3	3	17	19	1	1	2
Michigan	1,799	15	33	91	302	3	8	21
Minnesota	1,402	36	47	147	282	7	10	32
Missouri	1,343	16	17	109	123	5	5	12
Ohio	1,946	74	102	486	828	16	24	69
Wisconsin	1,273	17	25	131	231	4	7	17
Mountain	**4,613**	**95**	**106**	**573**	**702**	**20**	**24**	**73**
Arizona	1,132	8	10	28	43	1	1	7
Colorado	1,357	6	10	51	93	2	3	7
Idaho	390	3	3	13	17	0	1	2
Montana	287	2	3	23	29	1	1	2
Nevada	566	51	54	272	310	11	12	38
Utah	712	10	11	56	66	2	2	7
Wyoming	169	15	16	129	143	4	4	11
Northeast	**13,908**	**509**	**655**	**2,607**	**4,160**	**104**	**148**	**444**
Connecticut	921	43	54	213	327	9	13	37
Delaware	183	16	31	70	219	3	6	21
District of Columbia	46	4	4	26	26	2	2	3
Maine	581	14	21	80	170	2	4	14
Maryland	1,014	27	35	130	206	5	7	24
Massachusetts	1,507	38	65	235	500	10	18	43
New Hampshire	457	41	58	182	354	8	13	39
New Jersey	1,685	15	23	75	146	4	6	15
New York	4,228	228	244	1,135	1,289	46	51	166
Pennsylvania	2,714	30	44	103	268	4	9	30
Rhode Island	272	25	38	169	314	6	10	26
Vermont	300	27	39	190	342	6	10	26
Pacific	**8,983**	**171**	**258**	**763**	**1,715**	**31**	**58**	**174**
Alaska	124	11	16	55	114	2	3	11
California	6,437	78	120	347	785	17	30	81
Hawaii	163	2	3	25	31	1	1	2
Oregon	922	45	68	269	539	9	16	46
Washington	1,337	34	51	67	246	2	8	35
Southcentral	**5,396**	**50**	**70**	**289**	**521**	**9**	**16**	**48**
Arkansas	479	1	1	8	8	0	0	1
Louisiana	572	8	9	78	95	2	3	6
New Mexico	353	3	5	18	45	1	1	3
Oklahoma	623	3	3	32	35	1	1	2
Texas	3,369	35	52	153	338	5	10	35
Southeast	**7,715**	**66**	**76**	**376**	**504**	**12**	**15**	**53**
Alabama	687	3	6	17	45	1	1	4
Florida	4,218	42	45	204	240	7	8	31
Georgia	1,676	10	12	57	77	2	2	8
Mississippi	437	4	4	15	26	0	1	3
South Carolina	697	7	10	82	117	2	3	7
Grand Total	**59,375**	**1,455**	**1,878**	**7,408**	**12,170**	**279**	**409**	**1,278**

Impact estimates include regional multiplier effects.

Table 6-7. *Miscellaneous store retailers*: establishments, employment, payroll, sales, and economic impacts by region and state, 2007

Region / State	Number of establishments	Sales Million$)	Output Impact (Million$)	Employment (jobs)	Employment Impact (jobs)	Payroll (Million$)	Labor income Impact (Million$)	Value Added Impact (Million$)
Appalachian	**12,210**	**174**	**228**	**3,193**	**3,817**	**3,178**	**71**	**155**
Kentucky	1,844	26	38	420	579	317	11	26
North Carolina	3,663	48	57	813	918	1,100	17	39
Tennessee	2,652	34	55	614	838	660	17	37
Virginia	3,259	56	64	1,157	1,254	1,044	22	44
West Virginia	792	11	14	188	228	57	4	9
Great Plains	**2,883**	**28**	**36**	**663**	**770**	**552**	**12**	**24**
Kansas	1,242	12	18	285	358	256	6	12
Nebraska	810	7	8	176	190	194	3	6
North Dakota	342	5	6	125	138	50	2	4
South Dakota	489	3	4	78	85	52	1	3
Midwest	**24,674**	**371**	**481**	**7,800**	**9,148**	**6,245**	**158**	**327**
Illinois	4,720	93	93	1,821	1,821	1,597	30	65
Indiana	2,794	38	53	790	981	592	17	36
Iowa	1,436	10	13	225	258	265	4	8
Michigan	4,079	63	95	1,244	1,634	925	31	64
Minnesota	2,206	40	48	972	1,068	551	17	33
Missouri	2,665	31	46	613	791	559	14	31
Ohio	4,438	69	104	1,500	1,926	1,190	34	70
Wisconsin	2,336	26	29	635	668	566	10	20
Mountain	**8,579**	**106**	**126**	**1,895**	**2,151**	**2,366**	**40**	**87**
Arizona	2,477	30	35	534	595	786	11	24
Colorado	2,380	30	30	529	529	693	10	21
Idaho	715	7	10	128	170	167	3	7
Montana	648	9	13	176	224	94	4	9
Nevada	1,053	12	14	197	212	357	4	9
Utah	905	13	20	261	342	223	6	13
Wyoming	401	5	5	71	79	46	2	4
Northeast	**25,452**	**566**	**575**	**8,887**	**8,971**	**7,053**	**182**	**397**
Connecticut	1,383	31	31	590	590	542	10	21
Delaware	466	8	10	98	124	116	2	7
District of Columbia	266	9	9	146	147	21	3	6
Maine	919	10	10	164	164	132	3	7
Maryland	1,960	43	43	868	868	791	15	30
Massachusetts	2,634	67	67	1,219	1,219	781	23	46
New Hampshire	763	12	16	198	238	278	5	11
New Jersey	3,140	86	86	1,510	1,510	1,227	29	60
New York	7,973	194	194	1,932	1,932	1,589	56	133
Pennsylvania	5,050	93	93	1,886	1,886	1,359	31	65
Rhode Island	471	8	10	166	184	111	3	7
Vermont	427	6	6	109	109	108	2	4
Pacific	**18,803**	**296**	**318**	**4,995**	**5,261**	**7,562**	**103**	**222**
Alaska	436	6	11	100	159	77	4	7
California	12,746	224	224	3,686	3,686	5,863	72	158
Hawaii	763	18	26	313	421	271	9	18
Oregon	1,950	18	27	337	435	515	8	18
Washington	2,908	30	30	558	559	836	10	21
Southcentral	**13,036**	**1,294**	**1,999**	**15,643**	**24,985**	**3,537**	**526**	**1,341**
Arkansas	1,277	529	803	6,062	9,828	365	204	536
Louisiana	1,621	25	32	341	428	471	9	22
New Mexico	1,075	8	10	113	148	227	3	7
Oklahoma	1,501	622	986	7,125	11,963	423	256	663
Texas	7,562	111	167	2,001	2,618	2,050	54	113
Southeast	**16,274**	**236**	**286**	**4,100**	**4,725**	**5,411**	**89**	**197**
Alabama	1,728	30	47	561	783	452	15	32
Florida	8,196	114	114	1,886	1,886	3,108	35	80
Georgia	3,233	54	73	1,044	1,252	1,166	24	50
Mississippi	1,139	15	24	228	353	198	7	16
South Carolina	1,978	22	28	381	451	488	8	19
Grand Total	**121,911**	**3,071**	**4,047**	**47,175**	**59,829**	**35,905**	**1,181**	**2,750**

Impact estimates include regional multiplier effects.

Table 6-8. *All other retail stores*: establishments, employment, payroll, sales, and economic impacts by region and state, 2007

Region / State	Number of establishments	Sales (Million$)	Output Impact (Million$)	Employment (jobs)	Employment Impact (jobs)	Payroll (Million$)	Labor income Impact (Million$)	Value Added Impact (Million$)
Appalachian	**40,621**	**20**	**23**	**275**	**309**	**7**	**7**	**16**
Kentucky	5,697	3	3	35	38	1	1	2
North Carolina	13,078	4	5	50	63	1	2	3
Tennessee	8,672	3	3	43	45	1	1	2
Virginia	10,587	6	7	77	93	2	2	5
West Virginia	2,587	5	5	71	71	2	2	3
Great Plains	**9,063**	**11**	**15**	**139**	**197**	**3**	**4**	**10**
Kansas	3,807	1	1	14	17	0	0	1
Nebraska	2,656	2	2	20	27	0	1	1
North Dakota	1,156	4	7	53	95	1	2	5
South Dakota	1,444	4	4	53	58	1	1	3
Midwest	**75,244**	**35**	**43**	**464**	**562**	**9**	**12**	**29**
Illinois	14,307	6	7	75	81	2	2	5
Indiana	7,953	2	3	30	38	1	1	2
Iowa	4,780	1	2	20	27	0	1	1
Michigan	12,456	6	6	90	96	2	2	4
Minnesota	7,051	3	4	41	53	1	1	3
Missouri	7,977	6	8	72	97	1	2	5
Ohio	13,201	5	6	62	69	1	1	4
Wisconsin	7,519	6	8	72	100	1	2	5
Mountain	**24,279**	**14**	**21**	**193**	**291**	**4**	**6**	**14**
Arizona	6,702	2	3	29	39	1	1	2
Colorado	6,481	2	2	24	28	1	1	1
Idaho	2,200	1	1	10	12	0	0	1
Montana	1,842	6	10	69	135	1	3	7
Nevada	2,763	1	1	13	15	0	0	1
Utah	3,244	2	2	32	36	1	1	1
Wyoming	1,047	1	2	14	25	0	1	1
Northeast	**76,831**	**42**	**47**	**481**	**530**	**12**	**13**	**32**
Connecticut	4,508	5	5	47	49	1	1	3
Delaware	1,246	1	1	8	10	0	0	1
District of Columbia	535	2	2	21	21	1	1	1
Maine	2,214	1	1	14	14	0	0	1
Maryland	6,553	4	5	48	50	1	1	3
Massachusetts	8,149	8	8	92	94	2	3	6
New Hampshire	2,240	1	1	12	17	0	0	1
New Jersey	10,775	9	11	84	102	2	3	7
New York	23,198	5	5	57	62	1	2	4
Pennsylvania	14,886	3	3	51	51	1	1	2
Rhode Island	1,275	3	4	36	47	1	1	3
Vermont	1,252	1	1	11	12	0	0	1
Pacific	**51,993**	**41**	**49**	**546**	**632**	**14**	**16**	**34**
Alaska	808	2	3	25	26	1	1	2
California	37,454	24	30	343	405	9	11	20
Hawaii	1,321	5	6	57	69	2	2	4
Oregon	4,675	4	5	51	58	1	1	3
Washington	7,735	6	6	69	72	2	2	4
Southcentral	**45,611**	**33**	**44**	**418**	**551**	**9**	**12**	**30**
Arkansas	4,143	7	10	87	138	1	3	7
Louisiana	6,032	3	3	39	42	1	1	2
New Mexico	2,521	1	1	16	18	0	0	1
Oklahoma	4,691	5	7	62	86	1	2	5
Texas	28,224	17	22	213	266	5	6	15
Southeast	**56,928**	**23**	**30**	**299**	**383**	**7**	**9**	**20**
Alabama	7,451	4	5	69	78	1	2	3
Florida	24,754	5	7	68	90	2	2	5
Georgia	13,490	10	14	114	158	3	4	9
Mississippi	4,521	1	1	17	20	0	0	1
South Carolina	6,712	2	3	32	38	1	1	2
Grand Total	**380,570**	**218**	**271**	**2,815**	**3,455**	**64**	**80**	**185**

Impact estimates include regional multiplier effects.

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Appendix A--Glossary of Economic Impact TermsError! Bookmark not defined.

Terms are presented in a logical order rather than alphabetically

Region defines the geographic area for which impacts are estimated. Regions are generally an aggregation of one or more counties. This analysis includes estimates for individual states of the U.S.

Sector is a grouping of industries that produce similar products or services. Most economic reporting and models in the U.S. are based on the Standard Industrial Classification system (SIC code) or the North American Industrial Classification System (NAICS).

Impact analysis estimates the impact of a change in output or employment resulting from a change in final demand to households, governments or exports.

Input-output (I-O) model. An input-output model is a representation of the flows of economic activity between industry sectors within a region. The model captures what each business or sector must purchase from every other sector in order to produce its output of goods or services. Using such a model, flows of economic activity associated with any change in spending may be traced either forwards (e.g., spending generates employee wages which induces further spending) or backwards (e.g., purchases of plants that leads growers to purchase additional inputs -- fertilizers, containers, etc.). Multipliers for a region may be derived from an input-output model of the region's economy.

IMPLAN is a micro-computer-based input output modeling system and Social Accounting Matrix (SAM). With IMPLAN, one can estimate I-O models of up to 528 sectors for any region consisting of one or more counties. IMPLAN includes procedures for generating multipliers and estimating impacts by applying final demand changes to the model. The current version of the software is *IMPLAN* 3.

Final Demand is the term for sales to final consumers (households or government). Sales between industries are termed **intermediate sales**. Economic impact analysis generally estimates the regional economic impacts of final demand changes.

Direct effects are the changes in economic activity during the first round of spending. **Secondary effects** are the changes in economic activity from subsequent rounds of re-spending. There are two types of secondary effects: **Indirect effects** are the changes in sales, income or employment within the region in backward-linked industries supplying goods and services to businesses. For example, the increased sales in input supply firms resulting from more nursery industry sales is an indirect effect. **Induced effects** are the increased sales within the region from household spending of the income earned in the Green Industry and supporting industries. Employees in the Green Industry and supporting industries spend the income they earn on housing, utilities, groceries, and other consumer goods and services. This generates sales, income and employment throughout the region's economy. **Total effects** are the sum of direct, indirect and induced effects.

Multipliers capture the size of the secondary effects in a given region, generally as a ratio of the total change in economic activity in the region relative to the direct change**.** Multipliers may be expressed as ratios of sales, income or employment, or as ratios of total income or employment changes relative to direct sales. Multipliers express the degree of interdependency between sectors in a region's economy and therefore vary considerably across regions and sectors. **Type I** multipliers include only direct and indirect effects. **Type II** multipliers also include induced effects. **Type SAM** multipliers used by IMPLAN additionally account for capital investments and transfer payments such as welfare and retirement income. A **sector-specific multiplier** gives the total changes to the economy associated with a unit change in output or employment in a given sector**. Aggregate multipliers** sum multiplier effects across many sectors with a single number. They are based on an assumed distribution of spending across these economic sectors, i.e., a weighted average of sector specific multipliers with the percentage of spending in each sector as the weighting factor.

Purchaser prices are the prices paid by the final consumer of a good or service. **Producer prices** are the prices of goods at the factory or production point. For manufactured goods the purchaser price equals the producer price plus a retail margin, a wholesale margin, and a transportation margin. For services, the producer and purchaser prices are equivalent.

Margins. The retail, wholesale and transportation margins are the portions of the purchaser price accruing to the retailer, wholesaler, and grower, respectively. Only the retail margins of many goods purchased by consumers accrue to the local region, as the wholesaler, shipper, and manufacturer often lie outside the local area.

Measures of economic activity. Sales or output is the dollar volume of a good or service produced or sold. **Final Demand** is sales to final consumers, including households, governments, and exports. **Intermediate sales** are sales to other industrial sectors. **Income** is the money earned within the region from production and sales. Total income includes personal income (wage and salary income, including income of sole proprietor's profits and rents). **Jobs** or employment is a measure of the number of jobs required to produce a given volume of sales/production, usually expressed as full time equivalents, or as the total number including part time and seasonal positions. **Value Added** is the sum of total income and indirect business taxes. Value added is the most commonly used measure of the contribution of a region to the national economy, as it avoids double counting of intermediate sales and captures only the "value added" by the region to final products.