California's Working Landscape

A Key Contributor to the Economic Vitality in the Far North Region

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OVERVIEW AND METHODOLOGY

In November 2019, the Centers of Excellence for Labor Market Research (COE) collaborated with the University of California's Division of Agriculture and Natural Resources to study California's working landscape and the impact that industries associated with agriculture and natural resources have on the state's economy. The collaboration resulted in the report "California's Working Landscape: A Key Contributor to the State's Economic Vitality."[1] The report's regional focus was created by the COE, Los Angeles, and the COE, North/Far North. The report represents an effort to quantify the role of the many Californians whose livelihoods depend on the land and natural environment.

This report presents updated data and a focus on the 15-county Far North region (including the Northern Coastal and Northern Inland subregions). The geography corresponds to the subregion in the North/Far North region based on the California Community Colleges Chancellor's Office governance structure for Career Education (the North/Far North Regional Consortium).[2] In the 2019 report, the counties of the Far North subregion were divided among three subregions: the North Sacramento Valley, the Northern Sierra, and the Redwood Coast. In this report, the analysis uses the 15-county definition.

This study employs the industry definition of working landscape that was used in the 2019 study. It measures nine market segments (agricultural distribution, agricultural processing, agricultural production, agricultural support, fishing, forestry, mining, outdoor recreation, and renewable energy), the industry codes for which are presented in an appendix of the 2019 report. Appendix A of this report briefly describes the industry segments.

The analysis employs Emsi's input-output model for the first quarter of 2021, and it uses 2020 baseline data. Several measures based on Emsi's input-output tool (which in turn is based on Bureau of Economic Analysis accounts) indicate the breadth of each segment's workforce and its financial contribution to regional economies. This report uses industry data for establishment counts.

The report shows subregional totals and compares them to state totals. Appendix B provides tables detailing regional totals for the following metrics:

- **Employment:** the number of jobs in the industry segment based on multiple modeled measures, which are different than state employment agency measures

- **Total earnings:** the total earnings in the industry segment, including wages, salaries, additional benefits, and proprietor income (used for Gross Regional Product measures)

- **Sales income:** industry segment total annual sales (gross receipts) to consumers and businesses

- **Exports:** the amount of money paid by industries outside the region for goods or services produced inside the region in the industry segment

- **Establishments:** the number of locations (not necessarily separate businesses) associated with the industry segment (establishments data come from Emsi industry data)

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[1] Juan Madrigal et al. Centers of Excellence for Labor Market Research and University of California Agriculture and Natural Resources, "California's Working Landscape: A Key Contributor to the State's Economic Vitality," November 2019, https://www.ucop.edu/knowledge-transfer-office/_files/Econ%20 Impact%20Rpts/anr-ca-working-landscape-2019.pdf.

[2] The 15 counties in the Far North are Del Norte, Humboldt, Lake, Mendocino, Trinity, Butte, Colusa, Glenn, Lassen, Modoc, Plumas, Shasta, Sierra, Siskiyou, and Tehama. The North/Far North region also includes seven counties in the Greater Sacramento region: Sacramento, El Dorado, Placer, Nevada, Sutter, Yolo, and Yuba.

KEY FINDINGS

The Far North's working landscape economic activity is an important driver of jobs and wealth for the subregion and the state's economy. Taken together, the subregion's working landscape industries account for 58,000 jobs in 3,600 business establishments. In calendar year 2020, these industries generated $13.8 billion in sales income and $10.7 billion in exports. Worker earnings totaled $3.1 billion. Generally, these figures represent between 4% and 5% of state totals. Exports account for 9.4% of state totals.

Below are key findings for the seven segments that have the most jobs and establishments and the most earnings and sales, either in terms of subregional measure totals or as a share of the state's totals. Findings for the other two segments in the analysis, mining and outdoor recreation, are covered in this report's key measures sections.

Agricultural distribution: Along with the other agricultural segments, distribution is a segment leader across the measures; it generally represents about 2% of state totals for each measure. The distribution segment contains mostly wholesale business activities. The analysis estimates 6,000 jobs in 500 establishments in the subregion. The measures for 2020 include $1.0 billion in sales income, $600 million in exports, and $310 million in worker earnings.

Far North Working Landscape

- 58,000 jobs in 3,600 establishments
- $13.8 billion in sales income
- $10.7 billion in exports
- $3.1 billion in worker earnings
- 4% to 5% of state totals in key measures

Agricultural processing: The segment has 6,600 jobs in 230 establishments, mostly food products manufacturers. In 2020, the segment accounted for $3.4 billion in sales income, $3.0 billion in exports, and $390 million in worker earnings.

Agricultural production: The segment, consisting of on-farm activities, leads in nearly every measure, and generally represents 7% to 12% of the state's totals. Agricultural production has 21,500 job in the region in nearly 1,600 establishments. The segment has $4.3 billion in sales income, $3.2 billion in exports, $1.0 billion in worker earnings.

Agricultural support: The segment includes management, consulting, and some manufacturing operations. The segment measures generally represent 2% to 3% of state totals. Support activities account for 8,800 jobs in 500 establishments in the subregion. Industry activity in 2020 totaled $1.0 billion in sales income, $720 million in exports, and $420 million in worker earnings.

Fishing: Measure totals in the fishing segment are among the smallest of the totals for the nine working landscape segments. However, the subregion's fishing industries are responsible for large portions of state totals: 28% of exports, 18% of establishments, 12% of jobs, 9% of worker earnings, and 8% of sales income.

Forestry: One of the largest working landscape segments in the subregion, forestry has 9,300 jobs in 400 establishments. It accounts for sizeable dollar flows and shares of state totals. In 2020, it had $2.2 billion in sales income (9.5% of the state total) and $1.7 billion in exports (36% of the state total). Its $580 million in worker earnings is nearly 11% of the state total.

Renewable energy: Like fishing, the Far North's renewable energy segment is generally small (650 jobs in 13 establishments) but represents a large share of the state totals, generally 12% to 13% across measures. The subregion's renewable energy activities account for 27% of state exports.

Along with forestry, agricultural production, support, processing, and distribution are the largest and highest-producing segments.

Forestry, fishing, and renewable energy have the largest shares of state totals.

EMPLOYMENT

In 2020, the Far North region's working landscape provided nearly 58,000 jobs, 4.1% of the state total.

Agricultural distribution, processing, production, and support together accounted for nearly 75% of all the region's working landscape jobs. In total, these four segments employed more than 43,000 people.

Forestry is a significant contributor to working landscape employment. This segment accounted for nearly 9,300 jobs, 11.4% of the state total.

Though small in number (648), renewable energy jobs in the Far North accounted for 12.9% of the state total. The same is true for fishing jobs in the Far North, which accounted for 12.2% of the state total.
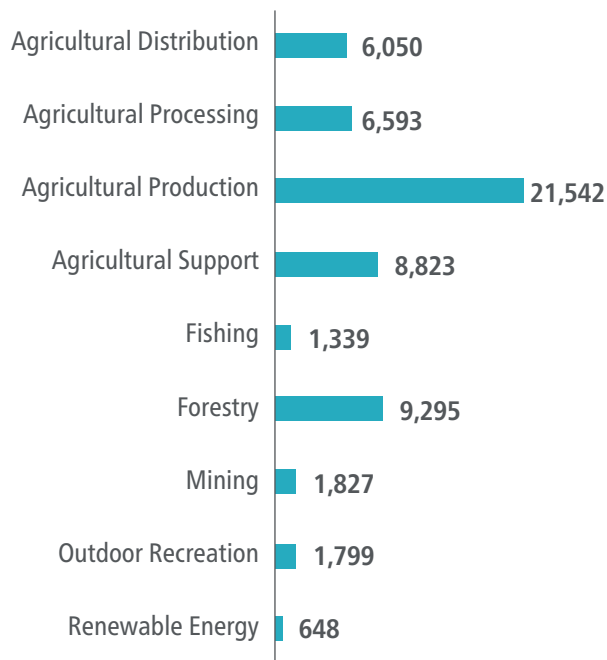
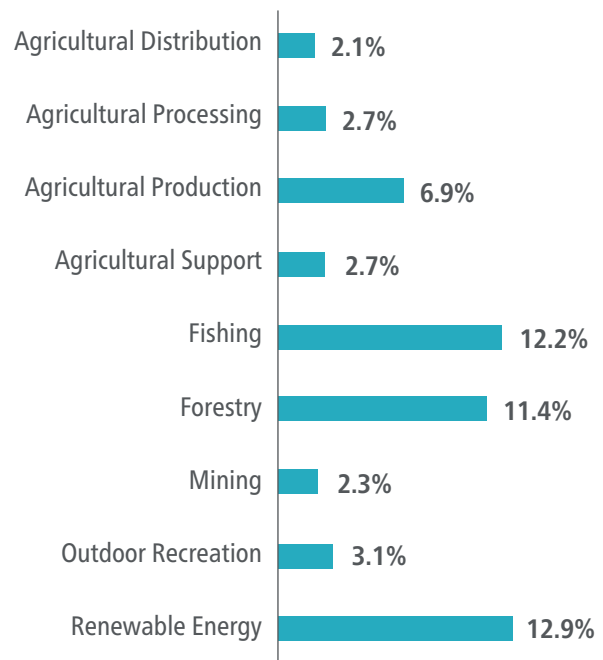## Jobs: Far North Working Landscape
58,000 jobs
4.1% of the state total

- Agricultural segments—43,000 jobs, 75% of the region total
  - Support—8,800
  - Distribution—6,000
  - Production—21,500
  - Processing—6,600
- Forestry—9,300, 11.4% of the state total
- Fishing—1,340, 12% of the state total
- Renewable energy—650, nearly 13% of the state total

Exhibit 1. Jobs by segment, Far North, 2020

Segment	Jobs
Agricultural Distribution	6,050
Agricultural Processing	6,593
Agricultural Production	21,542
Agricultural Support	8,823
Fishing	1,339
Forestry	9,295
Mining	1,827
Outdoor Recreation	1,799
Renewable Energy	648

Exhibit 2: Far North share of state jobs by segment, 2020

Segment	Share
Agricultural Distribution	2.1%
Agricultural Processing	2.7%
Agricultural Production	6.9%
Agricultural Support	2.7%
Fishing	12.2%
Forestry	11.4%
Mining	2.3%
Outdoor Recreation	3.1%
Renewable Energy	12.9%

EARNINGS

In 2020, the Far North region's working landscape generated $3.13 billion in earnings, 3.7% of the state total.

The agricultural segments accounted for 70% of the region's working landscape earnings ($2.2 billion). Agricultural production was the segment with the highest earnings: $1.06 billion. That figure represents 6.6% of the state total.

Forestry earnings totaled $580 million, 10.7% of the state total.

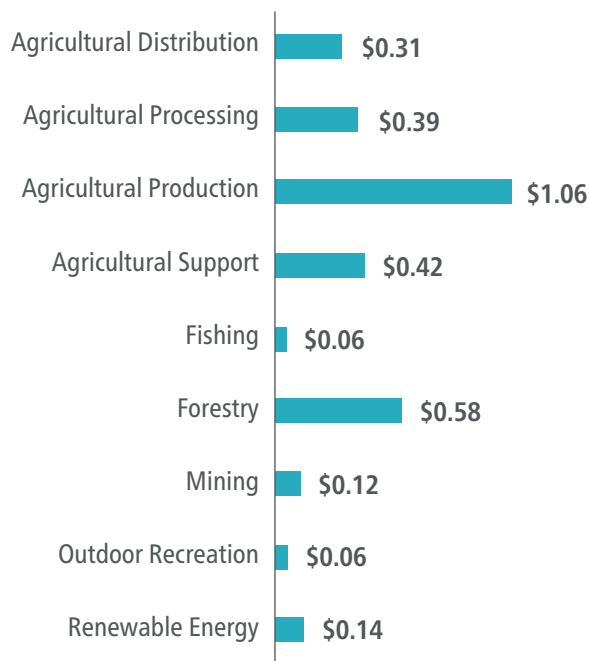Renewable energy had the largest regional share of state renewable energy earnings—14.6% ($140 million).
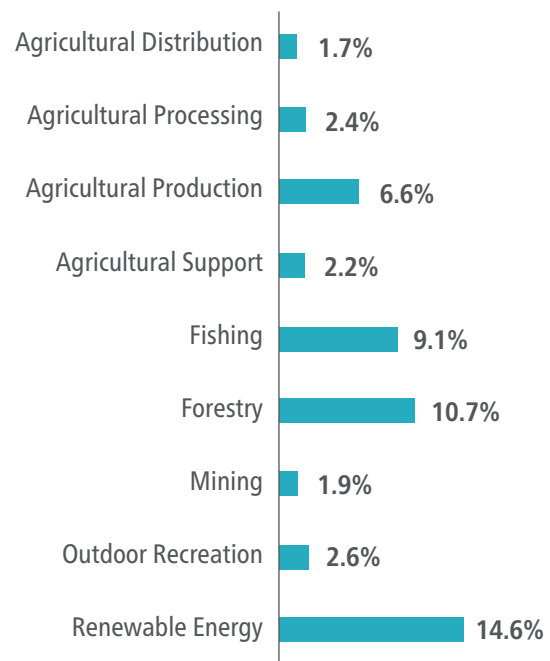
Earnings: Far North Working Landscape
$3.13 billion in earnings
3.7% of the state total

- Agricultural segments—$2.2 billion, 70% of the region total
- Renewable energy—$14 million, 14.6% of the state total
- Forestry—$580 million, 10.7% of the state total

Exhibit 3. Earnings by segment, Far North, 2020 (dollars in billions)

Segment	Earnings
Agricultural Distribution	$0.31
Agricultural Processing	$0.39
Agricultural Production	$1.06
Agricultural Support	$0.42
Fishing	$0.06
Forestry	$0.58
Mining	$0.12
Outdoor Recreation	$0.06
Renewable Energy	$0.14

Exhibit 4. Far North share of state earnings by segment, 2020

Segment	Share
Agricultural Distribution	1.7%
Agricultural Processing	2.4%
Agricultural Production	6.6%
Agricultural Support	2.2%
Fishing	9.1%
Forestry	10.7%
Mining	1.9%
Outdoor Recreation	2.6%
Renewable Energy	14.6%

SALES INCOME

In 2020, the Far North region's working landscape generated $13.8 billion in sales income, 4.1% of the state total.

Together, the agricultural segments accounted for $9.8 billion in sales income, 71% of the regional working landscape total. Agricultural production alone generated $4.34 billion in sales income, accounting for more than 30% of the region's working landscape sales income and 7% of the state's total.

Forestry sales income totaled $2.2 billion, 9.5% of the state's total.

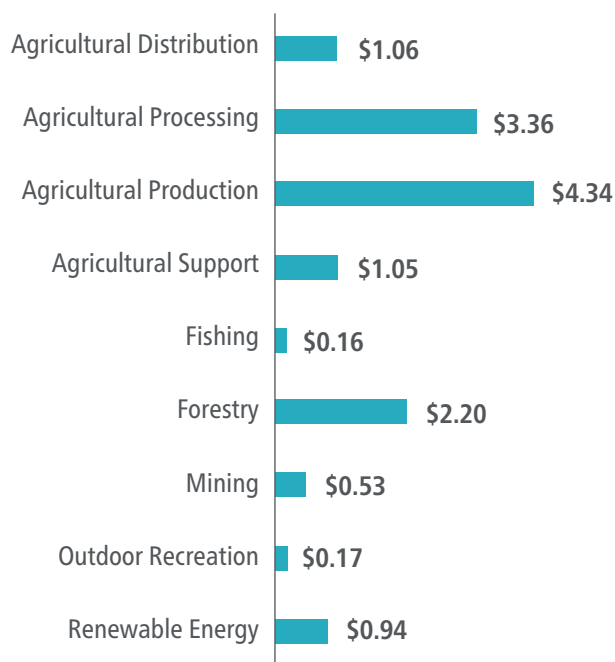Renewable energy sales income accounted for $940 million, 14.7% of the state's total.
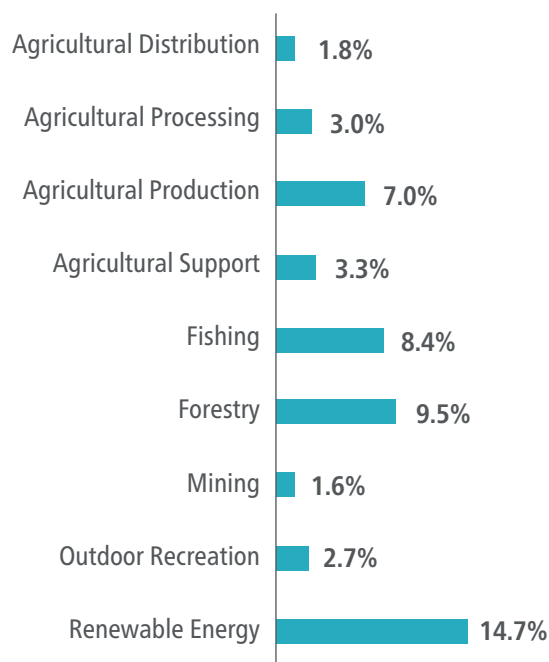
Sales Income: Far North Working Landscape

$13.8 billion in sales income
4.1% of the state total

- Agricultural production—$4.3 billion, 7% of the state total
- Agricultural processing—$3.4 billion, 3% of the state total
- Forestry—$2.2 billion, 9.5% of the state total
- Renewable energy—$940 million, nearly 15% of the state total

Exhibit 5. Sales income by segment, Far North, 2020 (dollars in billions)

Segment	Sales Income
Agricultural Distribution	$1.06
Agricultural Processing	$3.36
Agricultural Production	$4.34
Agricultural Support	$1.05
Fishing	$0.16
Forestry	$2.20
Mining	$0.53
Outdoor Recreation	$0.17
Renewable Energy	$0.94

Exhibit 6. Far North share of state sales income by segment, 2020

Segment	Share
Agricultural Distribution	1.8%
Agricultural Processing	3.0%
Agricultural Production	7.0%
Agricultural Support	3.3%
Fishing	8.4%
Forestry	9.5%
Mining	1.6%
Outdoor Recreation	2.7%
Renewable Energy	14.7%

ESTABLISHMENTS

In 2020, the Far North region's working landscape had 3,600 business establishments, 4.9% of the state total.

Of those establishments, more than 2,800, 4.5% of the state total, were related to agriculture. The largest segment, agricultural production, had 1,600 establishments, representing 11.7% of the state total.

With just 125 establishments, fishing represented 18% of the state total.

The 400 forestry establishments in the Far North comprised 10.7% of the forestry establishments in the state.
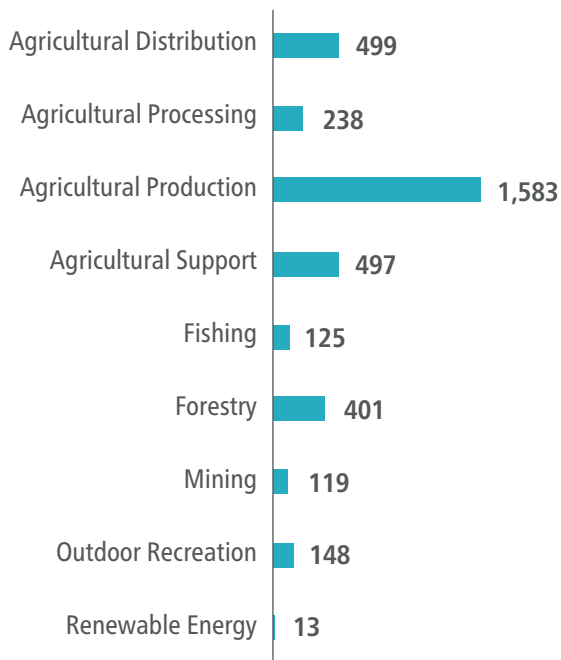
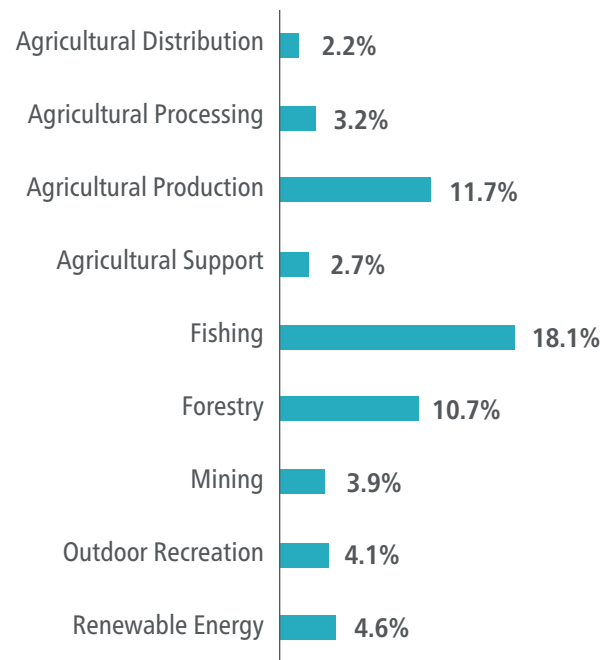**Establishments: Far North Working Landscape**

3,600 establishments
4.9% of the state total

- Agricultural production—1,600, nearly 12% of the state total
- Fishing—125, 18% of the state total
- Forestry—400, nearly 11% of the state total

Exhibit 7. Establishments, Far North, by segment, 2020

Segment	Establishments
Agricultural Distribution	499
Agricultural Processing	238
Agricultural Production	1,583
Agricultural Support	497
Fishing	125
Forestry	401
Mining	119
Outdoor Recreation	148
Renewable Energy	13

Exhibit 8. Far North share of state establishments by segment, 2020

Segment	Share
Agricultural Distribution	2.2%
Agricultural Processing	3.2%
Agricultural Production	11.7%
Agricultural Support	2.7%
Fishing	18.1%
Forestry	10.7%
Mining	3.9%
Outdoor Recreation	4.1%
Renewable Energy	4.6%

EXPORTS

In 2020, exports from the Far North region's working landscape industries totaled $10.7 billion, 9.4% of the state's total.

Agricultural processing and production exports together accounted for $6.2 billion, nearly 60% of the North/Far North's exports from working landscape industries. Exports from agricultural production ($3.2 billion) represent nearly 11% of the state's exports in the segment. Exports from agricultural processing ($3.0 billion) represent 7.4% of the state's exports in the segment.

Forestry exports totaled $1.7 billion, 36% of the state's forestry exports.

The Far North has a large share of the state's fishing exports. Although relatively small, in dollar terms the region's $120 million in fishing exports accounted for 28% of the state's fishing exports.
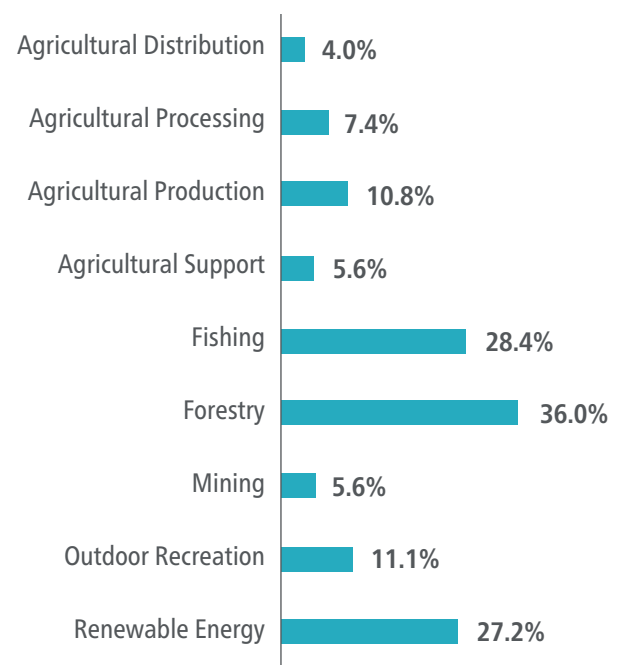
Exports: Far North Working Landscape
$10.7 billion in exports
9.4% of the state total

- Agricultural processing—$3 billion, 7.4% of the state total
- Agricultural production—$3.2 billion, nearly 11% of the state total
- Forestry—$1.7 billion, 36% of the state total
- Fishing—$120 million, 28% of the state total

Exhibit 9. Exports by segment, Far North, 2020 (dollars in billions)

Segment	Value
Agricultural Distribution	$0.60
Agricultural Processing	$3.03
Agricultural Production	$3.21
Agricultural Support	$0.72
Fishing	$0.12
Forestry	$1.70
Mining	$0.29
Outdoor Recreation	$0.11
Renewable Energy	$0.91

Exhibit 10. Far North share of state exports by segment, 2020

Segment	Share
Agricultural Distribution	4.0%
Agricultural Processing	7.4%
Agricultural Production	10.8%
Agricultural Support	5.6%
Fishing	28.4%
Forestry	36.0%
Mining	5.6%
Outdoor Recreation	11.1%
Renewable Energy	27.2%

Appendix A

Working Landscape Industry Segments

Industry codes used in this report's analysis can be found in an appendix of the state report on which this report is based. Below is a general description of each industry segment and the types of industries it includes. The industry definitions were developed by the report partners.

Agricultural production: The segment includes on-farm activities like crop production, animal production, and soil preparation.

Agricultural support: The segment includes management services, labor contractors, fertilizer and pesticide manufacturing, farm machinery manufacturing, wholesalers, and consulting services.

Agricultural processing: The segment largely consists of manufacturers of food products. Its wide array of food product industries includes rice milling, cane sugar manufacturing, fruit and vegetable canning, and soft drink manufacturing as well as breweries, wineries, and commercial bakeries.

Agricultural distribution: The segment consists of wholesale operations, including wholesalers for grocery, dairy, meat, confectionery, livestock, farm supplies, fruits and vegetables, and warehousing and storage.

Fishing: The segment's industries are for different types of fish and their wholesale and product preparation.

Forestry: The segment's industry activities include lumber harvesting and milling, product mills (paper and newsprint), and product manufacturing (e.g., windows, doors, cabinets, furniture, and plywood).

Mining: Activities in the segment include quarrying for raw materials used in multiple other industries (e.g., construction and electronics product manufacturing), mining for precious metals, and extraction of fossil fuels.

Outdoor recreation: Industries in the segment include skiing operations, parks, tour companies, hunting operations, marinas, and RV camps.

Renewable energy: The segment is composed of power generation industries: hydroelectric, solar, biomass, wind, and geothermal.

Appendix B

Economic Impacts of the Working Landscape

The tables below compare the economic impacts of working landscape industry segments in the Far North and California. The measures include jobs, earnings, sales, establishments, and exports. Exhibit B1 displays job and establishment totals and economic impacts in millions. Exhibit B2 shows the regional share of state totals.

Exhibit B1. Economic impacts by industry segment, Far North (FN) and California (CA), 2020 (dollars in millions)

	Jobs		Earnings		Sales		Establishments		Exports	
	FN	CA	FN	CA	FN	CA	FN	CA	FN	CA
Agricultural Distribution	6,050	293,820	$0.31	$18.57	$1.06	$58.68	499	22,765	$0.60	$14.95
Agricultural Processing	6,593	242,785	$0.39	$16.20	$3.36	$111.28	238	7,462	$3.03	$41.21
Agricultural Production	21,542	313,782	$1.06	$16.05	$4.34	$61.53	1,583	13,554	$3.21	$29.73
Agricultural Support	8,823	323,421	$0.42	$18.69	$1.05	$32.17	497	18,219	$0.72	$12.80
Fishing	1,339	11,013	$0.06	$0.62	$0.16	$1.92	125	688	$0.12	$0.43
Forestry	9,295	81,585	$0.58	$5.40	$2.20	$23.17	401	3,767	$1.70	$4.73
Mining	1,827	78,752	$0.12	$6.59	$0.53	$33.12	119	3,074	$0.29	$5.21
Outdoor Recreation	1,799	57,446	$0.06	$2.48	$0.17	$6.40	148	3,657	$0.11	$0.95
Renewable Energy	648	5,037	$0.14	$0.94	$0.94	$6.38	13	270	$0.91	$3.35
Total	**57,917**	**1,407,642**	**$3.13**	**$85.54**	**$13.80**	**$334.65**	**3,622**	**73,455**	**$10.69**	**$113.36**

Source: Emsi, 2021.1.

Exhibit B2. Far North share of state total economic impact by industry segment, 2020

	Jobs	Earnings	Sales	Establish.	Exports
Agricultural Distribution	2.1%	1.7%	1.8%	2.2%	4.0%
Agricultural Processing	2.7%	2.4%	3.0%	3.2%	7.4%
Agricultural Production	6.9%	6.6%	7.0%	11.7%	10.8%
Agricultural Support	2.7%	2.2%	3.3%	2.7%	5.6%
Fishing	12.2%	9.1%	8.4%	18.1%	28.4%
Forestry	11.4%	10.7%	9.5%	10.7%	36.0%
Mining	2.3%	1.9%	1.6%	3.9%	5.6%
Outdoor Recreation	3.1%	2.6%	2.7%	4.1%	11.1%
Renewable Energy	12.9%	14.6%	14.7%	4.6%	27.2%
Total	**4.1%**	**3.7%**	**4.1%**	**4.9%**	**9.4%**

Source: Emsi, 2021.1.

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MORE ABOUT THE
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The Centers of Excellence (COE) for Labor Market Research deliver regional workforce research and technical expertise to California Community Colleges for program decision making and resource development. This information has proven valuable to colleges in beginning, revising, or updating economic development and Career Education (CE) programs, strengthening grant applications; assisting in the accreditation process; and supporting strategic planning efforts.

The Centers of Excellence Initiative is funded in part by the Chancellor's Office, California Community Colleges, Economic and Workforce Development Program. The Centers aspire to be the leading source of regional workforce information and insight for California Community Colleges. More information about the Centers of Excellence is available at www.coeccc.net.

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