



THE STATE
of **ALASKA**

Department of Labor and
Workforce Development

Developing a Qualified Workforce: Alaska Industry Plans

Commissioner Dianne Blumer
Business Partnerships Director Wanetta Ayers

Resource Development Council
Anchorage, Alaska
October 16, 2014



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Department of Labor and
Workforce Development

- Workforce Investment Board
- AVTEC
- Business Partnerships Division
 - Workforce Investments
- Employment Security Division
 - Alaska Job Centers
 - Employment & Training
 - Adult Basic Education
 - Unemployment Insurance
- Workers Compensation Division
- Workers Compensation Appeals
- Labor Standards & Safety Division
 - Wage and Hour
 - AKOSH
- Vocational Rehabilitation Division
 - Disability Determination
- Alaska Labor Relations Agency



Workforce Development

Protect Workers

Income Replacement



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Good News

- **First Quarter Jobs – up 1,700**
- **Alaska Not #1 – in Work Comp Rates**
- **2015 UI Taxes – Reduced 20 Percent**





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Economic Development

“If you want 1 year of prosperity, grow grain.
If you want 10 years of prosperity, grow trees.
If you want 100 years of prosperity grow people.”

~ Chinese Proverb



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Occupational & Industry Forecast 2012-2022

- Alaska Gain 36,000 jobs
- More than 370,000 total
- Additional 95,000 replacement openings





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Workforce Development System



Education, employment,
and job-training efforts
designed to help employers
get a skilled workforce as well
as to help individuals
to succeed in the workplace.



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Partnerships

- Industry Workforce Plans
- Employer Needs Assessments
- Alaska Workforce Investment Board
- Hiring through Alaska Job Center
Network's Business Connections





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AVTEC

- Professional Cooking & Baking
- Alaska Maritime Training Center
- Allied Health (Anchorage)
- Diesel/Heavy Equipment
- Pipe & Combo Welding
- Information Technology
- Construction
- Plumbing & Heating
- Refrigeration
- Industrial Electricity
- Power Plant Operating





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Workforce Development Investments

Investing in Alaska's Talent Pipeline

- Career & Technical Education
- Adult & Incumbent Worker Training
- Industry Specific Training Funds
- Youth Development





ALASKA
OIL AND GAS WORKFORCE
DEVELOPMENT PLAN
2014 - 2018

Industry Steering Committee

Christina Anderson
Buccaneer Energy

Jack Beattie
TransCanada Alaska

Laurie Becwar
Shell Exploration and Production

Phil Cochrane
BP Alaska

Craig Hansen
Tesoro Alaska

Rick Harwell
Doyon Universal Services

Dave Haugen
Alaska Gasline
Development Corporation

Sam Hill
ASRC Energy Services

Bill Hurley
ConocoPhillips Alaska

Krishna Loescher
Carlile Transportation Systems

Fred Millen
Alyeska Pipeline

Methodology

Meeting One:

Review industry occupational composition, statistical data, and approaches to establishing priority occupations

Meeting Two:

Review of industry trends in exploration and production, near-term and long-term projects and possible impacts on workforce demand

Meeting Three:

Review of labor supply, transitioning populations, and educational systems

Meeting Four:

Review of the first draft of the report

Alaska's Oil and Gas Industry

Oil and Gas Industry Defined

NAICS Code	Category	Number of Firms
21-1111	Crude petroleum and natural gas extraction	30
21-3111	Drilling oil and gas wells	11
21-3112	Support activities for oil and gas operations	77
22-1210	Natural gas distribution	5
23-7120	Oil and gas pipeline construction	38
33-6611	Ship building and repairing	10
48-6110	Pipeline transportation of crude oil	9
48-6210	Pipeline transportation of natural gas	1
48-6910	Refined petroleum product pipeline transportation	2

Workforce Analysis

20,249 workers

270 occupations

Increasing employment

Shifting age profile

29 percent nonresident
employment

Typical occupational churn rate
of 20 to 30 percent

2,000 new workers due to
growth

5,500 replacement workers

Limitations:

- Lag in occupational level data
- Changing regulatory requirements
- Changing business planning requirements
- Changing operational practices
- Shifting focus to natural gas, offshore, shale, and unconventional oil plays



THE ALASKA
OIL AND GAS
INDUSTRY

IMPACTS MORE THAN

45,000

WORKERS

WITH EARNINGS OF

\$2.65 BILLION

THAT'S MEGA

Priority Occupations

Top 25 occupations based on:

Worker count

Average earnings

Average age of incumbent
workers

Residency

Industry guidance:

- Emphasize exploration and production jobs
- Long-term career positions versus short-term or seasonal
- Reflect recent changes in the industry

Priority Occupations

Engineering

is a discipline that drives project development, construction, and operations in the oil and gas industry and cuts across each of the other priority occupational groups.

New exploration incentives and business opportunities have increased the need for workers with education and experience in the

Geosciences.

New technologies, aging oil fields and infrastructure, and new modes of production and operation are increasing industry demand for skilled workers in **remote sensing and inspection** occupations.

Increasing regulatory and business planning requirements have changed industry demand for **health, safety, security, and environmental** (HSSE) workers.

Development of offshore opportunities in the Cook Inlet and the Chukchi and Beaufort seas are increasing industry demand for **onshore and offshore maritime** workers.

Career Clusters and Pathways for Priority Oil and Gas Occupations

Career Cluster	Career Pathway
Agriculture, Food, and Natural Resources	Environmental Service Systems
	Natural Resources
Architecture and Construction	Construction
	Design/Pre-construction
Manufacturing	Production
	Quality Assurance
STEM	Engineering and Technology
	Science and Math
Transportation, Distribution, and Logistics	Transportation Operations
	Warehousing and Distribution Center Operations

Alaska's Talent Pipeline

Alignment with Secondary and Postsecondary Education and Training

Postsecondary Education, by 2012
Alaska High School Graduates and GED Recipients, 2005-2011

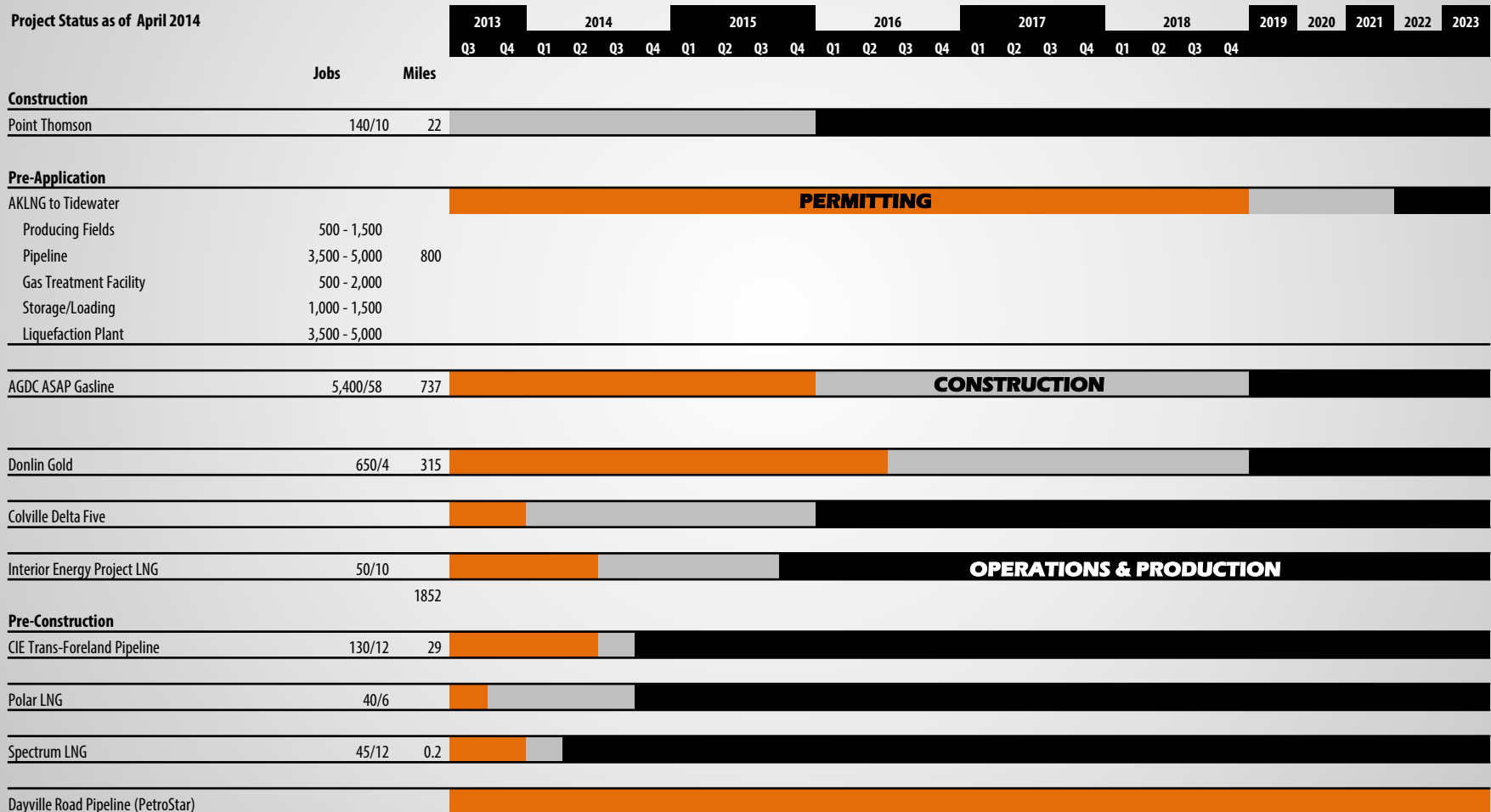
Academic Year	High School Outcome	Students	College Graduate	Some College or still Enrolled	Job Training Only	No Postsecondary
2004-2005	GED	784	12	230	191	351
2004-2005	Graduate	6,233	1,685	2,755	591	1,202
2005-2006	GED	814	14	256	198	346
2005-2006	Graduate	6,745	1,508	3,244	633	1,360
2006-2007	GED	640	6	183	194	257
2006-2007	Graduate	7,058	1,080	3,632	1,317	1,029
2007-2008	GED	528	4	134	131	259
2007-2008	Graduate	7,182	258	4,448	609	1,867
2008-2009	GED	456	0	104	130	222
2008-2009	Graduate	7,250	113	4,464	650	2,023
2009-2010	GED	399	0	75	101	223
2009-2010	Graduate	7,529	23	4,317	657	2,532
2010-2011	GED	277	1	34	50	192
2010-2011	Graduate	7,322	1	3,529	282	3,510

*Postsecondary outcomes were derived from the National Student Clearinghouse and Alaska's job training providers.

Trends in the Alaska Oil and Gas Industry

Portfolio of Pipeline Projects

Project Status as of April 2014



Action Agenda

Action Agenda

Goal 1. Engage Alaskans in oil and gas workforce development

Goal 2. Train Alaskans for oil and gas industry employment

Goal 3. Recruit qualified candidates for oil and gas career pathways

Goal 4. Retain a skilled oil and gas workforce

Goal 5. Prepare the Alaska Workforce Development System for future oil and gas workforce demand

Next Steps

Establish a collaborative charter amongst the plan stakeholders

Establish lead partners on specific goals/strategies

Establish work groups on priority occupational groups

- HSSE Occupations
- Petroleum and Engineering Technicians

Coordinate with other planning processes to ensure representation of industry priorities

Set first plan review/progress update – Nov/Dec 2014



ALASKA MARITIME WORKFORCE DEVELOPMENT PLAN

Supporting a strong, sustainable maritime workforce in Alaska

Industry Advisory Committee

Kris Norosz, Co-chair

Icicle Seafoods, Inc.

Jason Custer

City of Saxman

Julie Decker

United Fishermen of
Alaska/Alaska Fisheries
Development Foundation

**Russell Dick and
Anthony Lindoff**

Haa Aani, LLC

Aggie Fouts

Western Alaska Community
Development Association

Kurt Hallier

Conoco Phillips

Oliver Holm

Kodiak Seafood Harvester

Stephanie Madsen

At-sea Processors
Association

Vince O'Shea

Pacific Seafood Processors
Association

Steve Reifenstuhl

Northern Southeast Regional
Aquaculture Association

Jim Scholz

Samson Tug and Barge

Pearl Strub

Bristol Bay Economic
Development Corporation

Doug Ward

Vigor Alaska

University of Alaska FSMI Leadership Group

Paula Cullenberg, Co-chair

Alaska Sea Grant,
University of Alaska Fairbanks

Fred Villa, Co-chair

Workforce Programs, University of Alaska

Michael Castellini

School of Fisheries and Ocean Sciences,
University of Alaska Fairbanks

Richard Caulfield

Provost, University of Alaska Southeast

Gunnar Knapp

Institute of Social and Economic Research,
University of Alaska Anchorage

Bonnie Nygard

Workforce Programs, University of Alaska
Anchorage

Pete Pinney

College of Rural and Community
Development,
University of Alaska Fairbanks

Methodology

A two-year collaborative process initiated in 2011 as the Fisheries, Seafood, and Maritime Initiative, led by the Industry Advisory Committee with support from the University of Alaska FSMI Leadership Group and participation from five state agencies.

- Inventory of maritime related training
- Gap analysis of educational and training needs
- Industry forums
- Leadership meetings
- Occupational needs assessments for four sectors
- Identified priority occupations and skillsets
- Developed strategic plan to enhance Alaska's maritime workforce

See the FSMI Web site for additional information and working documents:
www.alaska.edu/fsmi

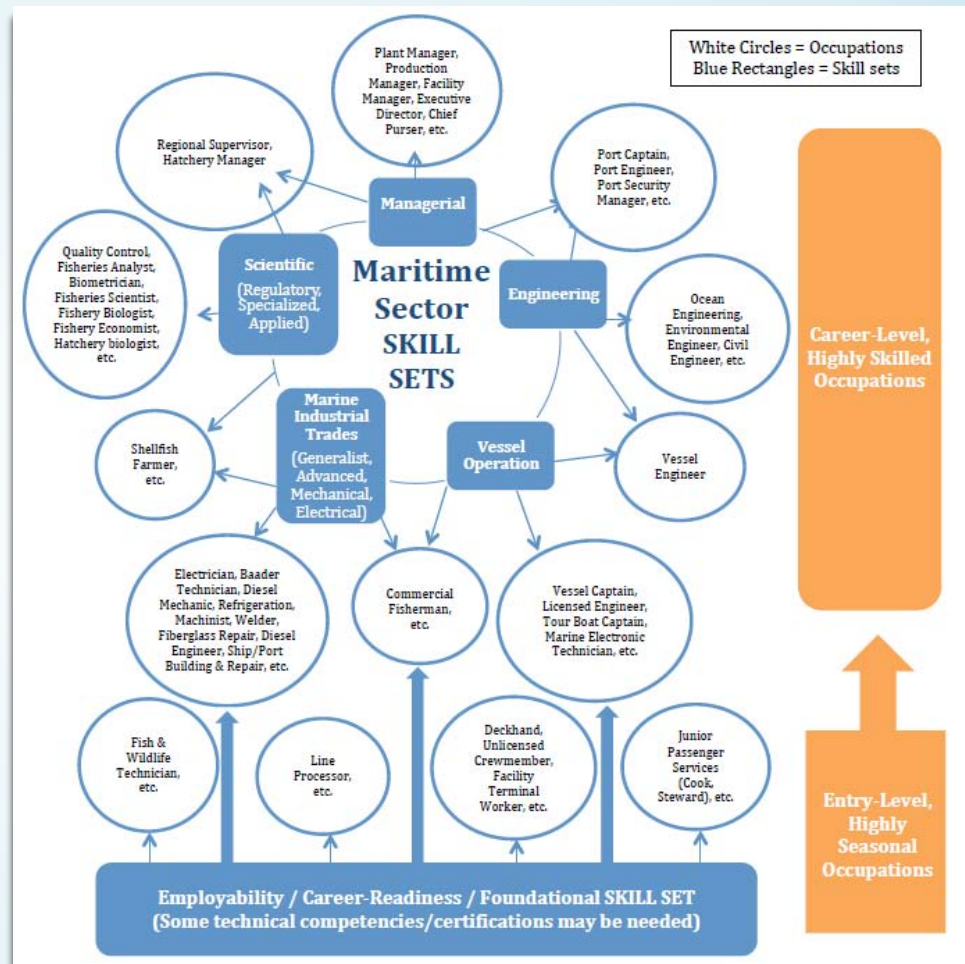
Alaska's Maritime Workforce

Estimated Maritime Workforce by Sub-sectors

Sub-Sector	# Workers	Percent Resident	# of Resident Workers	Average Age
Commercial Fishing	30,980	56	17,349	N/A
Seafood Processing	22,412	27	6,051	40
Water Transportation	4,056	62	2,515	39
Sportfish Guiding	3,034	72	2,184	N/A
Boat Building/Repair	693	76	527	38
Salmon Hatcheries	456	64	292	37
Marine Engineering/Surveying	183	85	156	40
ADFG, USCG, NMFS	5,641	N/A	5,077	N/A
Total	68,042	N/A	34,150	N/A

Workforce Analysis

Cross-cutting and Essential Skills of the Maritime Workforce



Priority Occupations by Sector

Priority Occupations: Seafood Harvesting

- **Commercial Seafood Harvester
(permit holders and crewmembers)**
- **Vessel Repair and Maintenance Service Provider
(outlined under marine occupations)**
- **Shellfish Farmer**



Priority Occupations: Seafood Processing

- Seafood Plant and Floating Processor Engineer
- Refrigeration Engineer and Technician
- Seafood Production Manager
- Electrician
- Can Machinist
- Quality Control and Assurance Manager and Technician
- Baader Technician
- Seafood Plant Manager
- Deckhand (see Marine Occupations)



Priority Occupations: Research, Enhancement & Management

- Biometrician
- Fish and Wildlife Technician
- Fishery Biologist
- Fisheries Scientist
- Fish and Game Coordinator
- Fishery Economist, Analyst, and Management Specialist
- Fishery Management Specialist – NOAA
- Hatchery Manager

Priority Occupations: Marine Occupations and Support Industries



- Ship Building
- Vessel Operations: Deckhand, Vessel Engineer, Captain
- Vessel Repair and Maintenance Service Provider

Maritime Workforce Development Strategies

Maritime Workforce Development Strategies

1. Grow Awareness of Maritime Occupations and Develop Career Pathways
2. Improve Workforce Readiness
3. Train Alaskans for Maritime Careers
4. Support Recruitment and Retention
5. Promote Sustained Industry Engagement



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Investing in Alaska's Talent Pipeline

- \$27.5 million workforce training
- \$1.25 billion K-12
- \$0.9 billion University of Alaska