The Water Workers:

Workforce Opportunities in Water Management in Southeast Louisiana

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THE DATA CENTER

The Water Workers

> *The deterioration of Louisiana's coast and the challenge of restoring it has been the focus of significant media attention recently.[1] The scale of the restoration challenge is gigantic, with a price tag of $50 billion according to the state's most recent Coastal Master Plan.[2] Even initial steps to execute this plan, while small in comparison to the full effort needed, are nonetheless, enormous.*

Large coastal restoration and protection projects already underway are galvanizing forces behind a growing "water management" industrial cluster.[i] Employing 64,587 people in 2013, water management is one of the largest clusters in Southeast Louisiana[ii] and is among the fastest growing.[3]

There is no doubt that jobs in the water management (WM) cluster will continue to grow. Several tangible factors will fuel this growth for at least the next three to five years, including:

* planned investment from the Coastal Protection and Restoration Authority (CPRA) into sediment diversion, marsh creation, barrier island building, and other large coastal construction projects;[4]

* local parishes increasingly taxing themselves to fund levees and other protection systems;[5]

* an invigorated wetland mitigation market responding to the demand from current and planned capital-intensive energy investments;[6] and

* private industries along the coast turning to coastal protection measures themselves to combat rising sea levels and demonstrate resiliency.[7]

This brief highlights the types of jobs that are and will become available in WM, the industry clusters that are competing for the same workers, and areas where there may be opportunity for collaborative training and education investment.

WHAT TYPES OF JOBS ARE IN THE WATER MANAGEMENT INDUSTRY?

The WM cluster is comprised of relatively high-paying jobs that require low-to-moderate levels of training and education. Of the top 20 jobs in WM, half do not require a college education. Seven occupations do not require an apprenticeship. Nevertheless, the other half of the top WM occupations require either a bachelor's or an associate's degree, indicating a level of technical specialization within the WM cluster as well as a need for engineering, information technology, financial, and managerial programs to train these important positions.

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i   Economic clusters are concentrations of businesses and institutions in a particular field. The Data Center uses the Cluster Mapping Project definition of clusters. Water management is a combination of the construction products and services and business services clusters.
ii   Southeast Louisiana is defined geographically as the Southeast Louisiana super region. It is composed of the three metropolitan statistical areas of Houma-Thibodaux, New Orleans, and Baton Rouge and the two additional parishes of Tangipahoa and Washington which fall within Greater New Orleans.

Top occupations in water management in Southeast LA, 2014

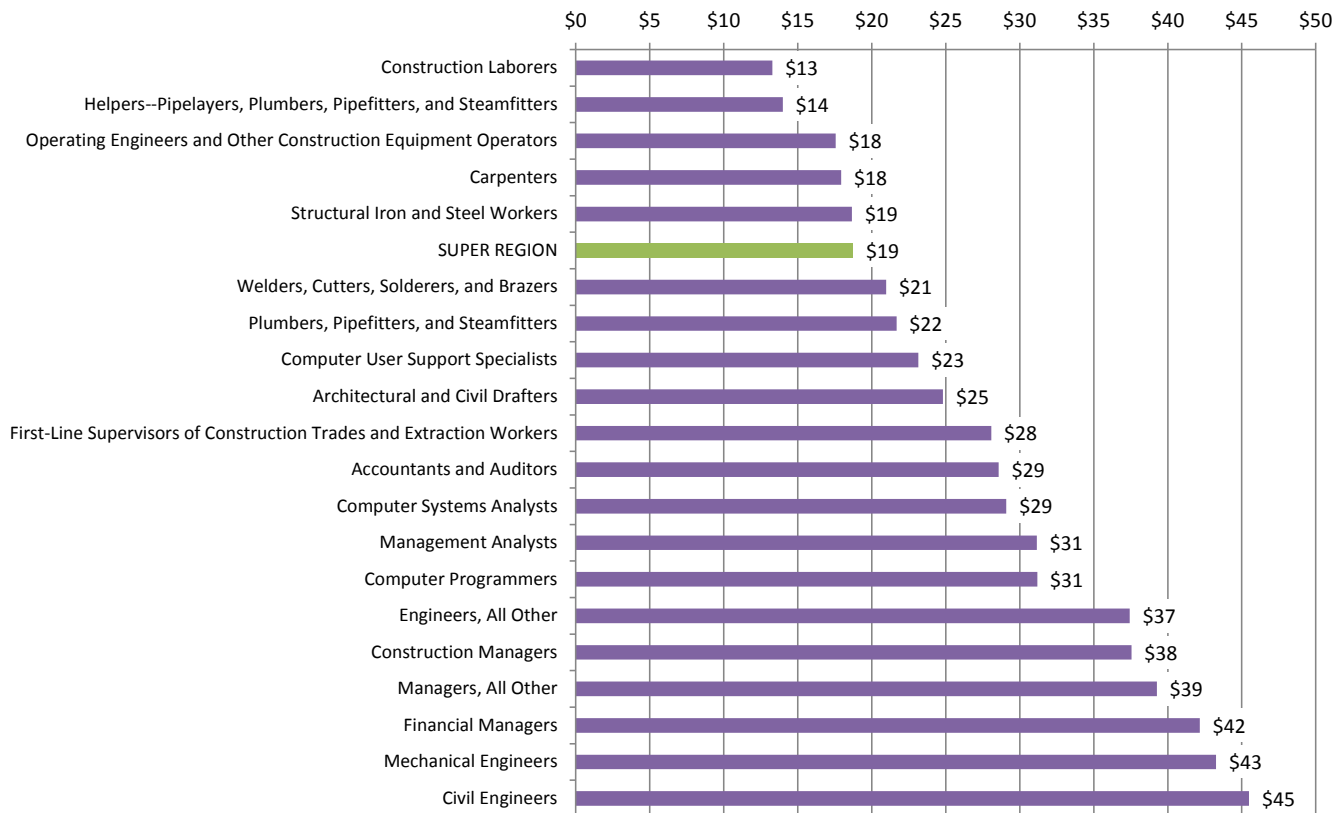| OCCUPATION	EDUCATION & TRAINING REQUIREMENTS	MEDIAN HOURLY EARNINGS	EMPLOYED IN WM
Construction Laborers	Short-term on-the-job training	$13.28	4,026
First-Line Supervisors of Construction Trades and Extraction Workers	High school diploma or equivalent	$28.07	1,753
Managers, All Other	High school diploma or equivalent	$39.26	671
Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	High school diploma or equivalent and short-term on-the-job training	$13.99	621
Operating Engineers and Other Construction Equipment Operators	High school diploma or equivalent and moderate on-the-job training	$17.56	2,122
Welders, Cutters, Solderers, and Brazers	High school diploma or equivalent and moderate on-the-job training	$20.97	1,585
Carpenters	High school diploma or equivalent and apprenticeship	$17.93	2,189
Structural Iron and Steel Workers	High school diploma or equivalent and apprenticeship	$18.66	658
Plumbers, Pipefitters, and Steamfitters	High school diploma or equivalent and apprenticeship	$21.67	1,413
Computer User Support Specialists	Some college, no degree and moderate on-the-job training	$23.15	669
Architectural and Civil Drafters	Associate's degree	$24.81	800
Civil Engineers	Bachelor's degree	$45.49	1,893
Mechanical Engineers	Bachelor's degree	$43.26	727
Financial Managers	Bachelor's degree	$42.16	732
Engineers, All Other	Bachelor's degree	$37.43	657
Computer Programmers	Bachelor's degree	$31.18	630
Management Analysts	Bachelor's degree	$31.15	654
Computer Systems Analysts	Bachelor's degree	$29.09	682
Accountants and Auditors	Bachelor's degree	$28.58	1,939
Construction Managers	Bachelor's degree and moderate on-the-job training	$37.55	958

Source: The Data Center analysis of data from EMSI.

Notes: The top jobs in WM are defined as the occupations with the largest number of jobs within the WM cluster that also represent at least 20 percent of all WM jobs region wide. This 20 percent cutoff was established to filter out administrative positions that exist across all clusters and that are not characteristic of the WM industry specifically.

HOW MUCH DO THESE JOBS PAY?

Fully 15 out of the top 20 WM occupations pay more than the regional median earnings for all Southeast Louisiana jobs at $18.73 per hour. And of those water management jobs that pay more than $18.73 per hour, six do not require a bachelor's degree.

Median hourly earnings for top occupations in water management in Southeast LA, 2014

Occupation	Median hourly earnings
Construction Laborers	$13
Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	$14
Operating Engineers and Other Construction Equipment Operators	$18
Carpenters	$18
Structural Iron and Steel Workers	$19
SUPER REGION	$19
Welders, Cutters, Solderers, and Brazers	$21
Plumbers, Pipefitters, and Steamfitters	$22
Computer User Support Specialists	$23
Architectural and Civil Drafters	$25
First-Line Supervisors of Construction Trades and Extraction Workers	$28
Accountants and Auditors	$29
Computer Systems Analysts	$29
Management Analysts	$31
Computer Programmers	$31
Engineers, All Other	$37
Construction Managers	$38
Managers, All Other	$39
Financial Managers	$42
Mechanical Engineers	$43
Civil Engineers	$45

Source: The Data Center analysis of data from EMSI.

WHAT IS THE OUTLOOK FOR THESE OCCUPATIONS?

The excel table that accompanies this brief, Table 1, provides detailed information about the top 20 jobs in WM. The table reveals that:

* More than 3,500 jobs were added in the top 20 WM jobs between 2010 and 2014 in Southeast Louisiana.[i] The largest growth was seen in middle-skill occupations, such as welders, carpenters, and pipefitters. There was also significant growth in jobs for accountants and construction laborers.

* In many of the top 20 WM occupations, over 15 percent of the workforce is 55 years old or more.

* New jobs, plus retirements, will yield more than 12,000 job openings[ii] between 2015 and 2019 in the top 20 WM occupations.

The thousands of projected job openings in the top 20 WM occupations represent an employment boon for Southeast Louisiana.

However, because occupations span many industries, WM employers will have to compete with other employers that seek these same skill sets.
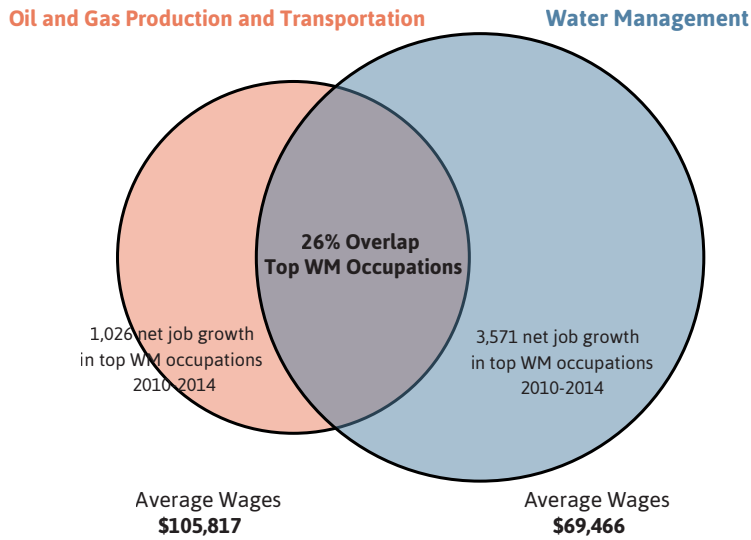
WHAT INDUSTRIES COMPETE FOR THESE WORKERS?

Of the top 20 occupations in WM, the greatest overlap is with two specific industry clusters: local real estate, construction, and development, as well as oil and gas production and transportation.

Oil and gas has significant overlap with WM. The mutual need for skilled craft workers between WM and the energy and petrochemical manufacturing sector means that of projected new job growth by 2024, a considerable percentage would be in occupations shared by both industries.[8] Moreover, the similarity of work shifts and lifestyle in WM and oil and gas makes the clusters direct competitors for skilled and educated labor.[9]

Water management has a distinct wage disadvantage as compared to oil and gas where average annual wages are $105,817. However, jobs in the WM cluster grew at a faster rate from 2010 to 2014.

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i   Jobs added in WM cluster alone.
ii   EMSI job opening projections, based on the combination of BLS turnover data and job growth.

Overlap of top water management occupations with oil and gas cluster, Southeast LA, 2014

Oil and Gas Production and Transportation   **Water Management**

**26% Overlap
Top WM Occupations**

1,026 net job growth
in top WM occupations
2010-2014

3,571 net job growth
in top WM occupations
2010-2014

Average Wages
$105,817

Average Wages
$69,466

Source: The Data Center analysis of data from EMSI.
Notes: Average wages refer to all occupations in each industry cluster

Substantial overlap between water management and local real estate/construction is also notable. Despite lower annual wages, the proximity of local construction jobs to population centers may be more appealing to many workers who would otherwise consider work in coastal restoration.

Overlap of top water management occupations with local real estate/construction cluster, Southeast LA, 2014
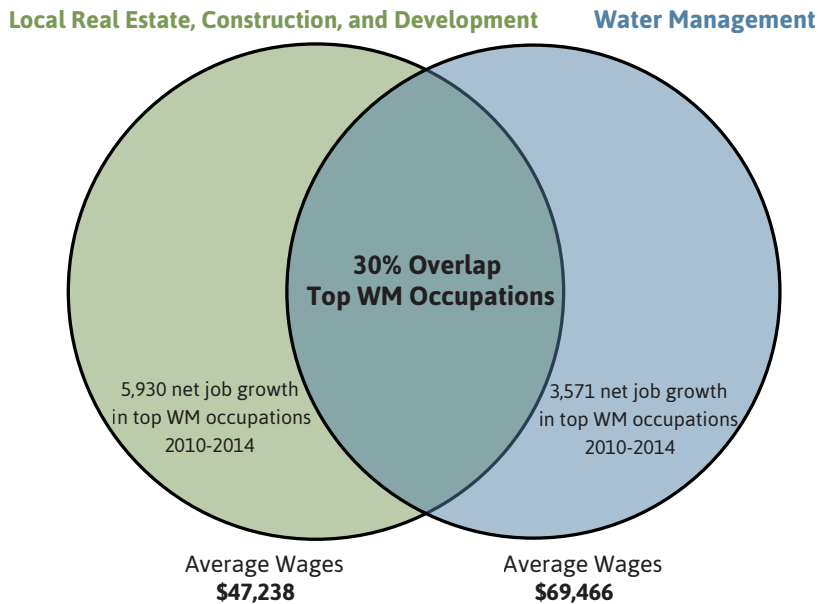
Local Real Estate, Construction, and Development   **Water Management**

**30% Overlap
Top WM Occupations**

5,930 net job growth
in top WM occupations
2010-2014

3,571 net job growth
in top WM occupations
2010-2014

Average Wages
$47,238

Average Wages
$69,466

Source: The Data Center analysis of data from EMSI.
Notes: Average wages refer to all occupations in each industry cluster

The shared occupations between these three industries represents not only possible competition, but also potential for collaboration in skills training and education investment across clusters. With each industry growing jobs, there will be shared challenges to training and scaling up the necessary workforce, as well as transporting workers to job sites away from population centers.

New jobs plus retirements
will yield more than
12,000 job openings
between 2015 and 2019
in the top 20 water
management occupations.

About the Authors

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About The Data Center

The Data Center is the most trusted resource for data about greater New Orleans and Southeast Louisiana. Since 1997, The Data Center has been an objective partner in bringing reliable, thoroughly researched data to conversations about building a more prosperous, inclusive, and sustainable region.

The Data Center (formerly known as the Greater New Orleans Community Data Center) became the local authority for tracking post-Katrina recovery with The New Orleans Index, developed in partnership with the Brookings Institution.

Acknowledgments

Endnotes

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9. Ibid.