

Jobs & Dollars

BIG RETURNS from
coastal habitat restoration



America's coasts are vital to our nation's economy. They supply key habitat for over 75% of our nation's commercial fish catch and 80-90% of the recreational fish catch.

Restoring our coasts can create more than 30 jobs for each million dollars invested. That's more than twice as many jobs as the oil and gas and road construction industries combined.

In 2007, coastal counties provided half of US gross domestic product and 40% of the nation's jobs.

The US economy depends on our coasts and estuaries

By 2025, 75% of Americans will live within 50 miles of a coast.¹ Within this narrow band are estuaries—vibrant areas where freshwater mixes with saltwater to create some of the most productive ecosystems on the planet. Estuaries provide food and refuge for diverse fish, birds, and mammals. They are environmental treasures and their productivity is vital to our nation's economy, supplying important natural resources and millions of jobs.

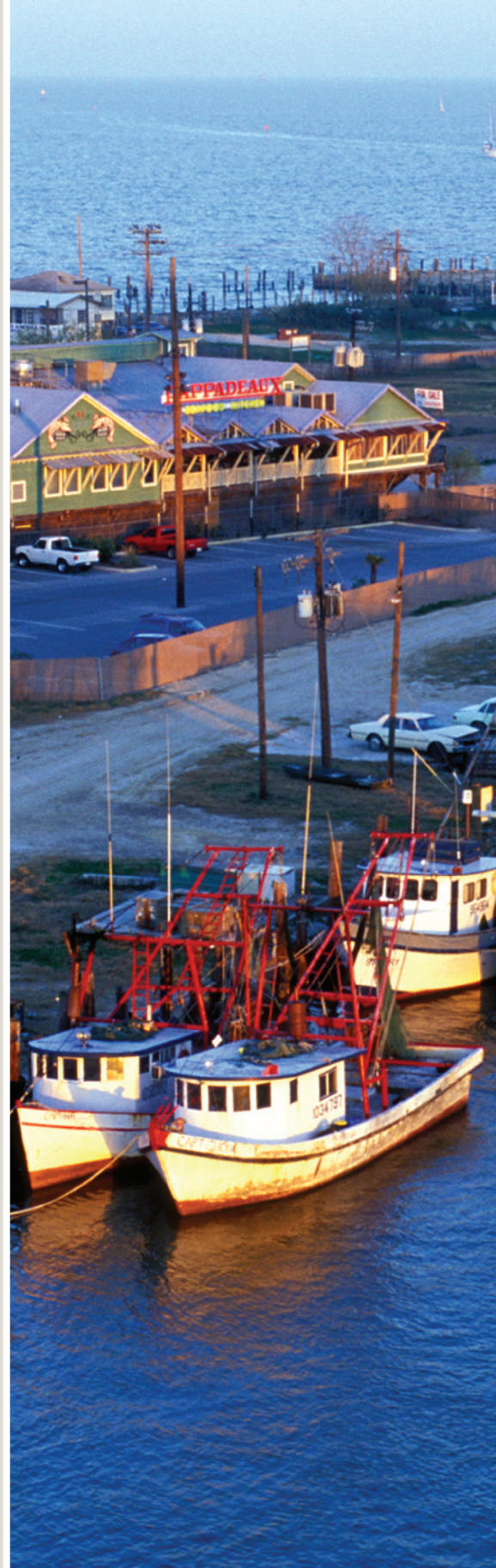
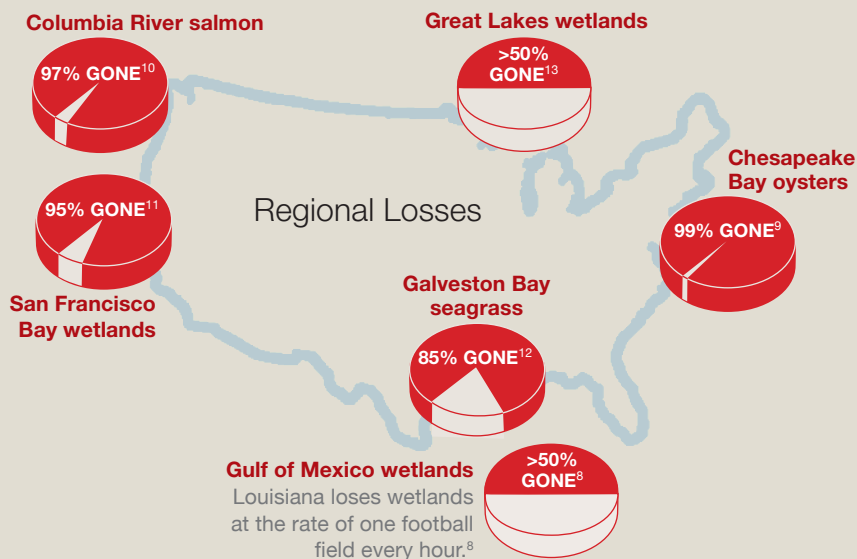
Our US coastal regions are economic engines

They:

- Supply key habitat for over 75% of our nation's commercial fish catch and 80-90% of the recreational fish catch²
- Provide 40% of US employment³
- Support more than 69 million jobs⁴
- Generate half the nation's Gross Domestic Product⁵
- Protect almost \$2 trillion in trade each year⁶
- Provide \$214 billion annually in leisure and hospitality jobs⁷

Destroying estuaries destroys economic value

Over the past century, human use and development have severely stressed these natural resources.



Restoration: healthy coasts, healthy economies

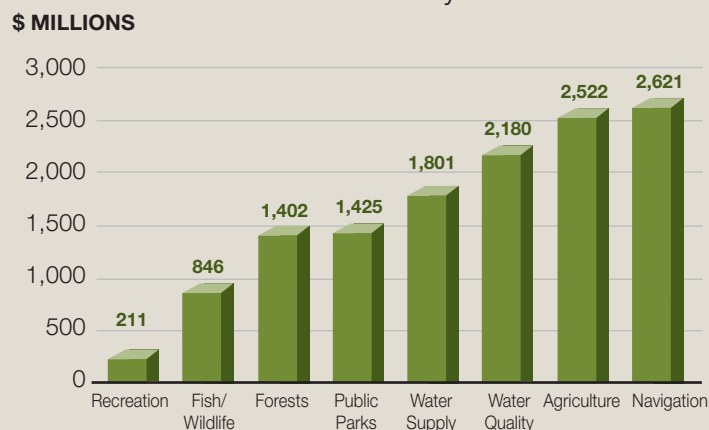
Projects that restore coastal habitats help estuaries remain healthy, functioning ecosystems. A healthy estuary provides clean water, supports fish and wildlife, protects coastal communities from storm damage, and allows for human uses such as boating and fishing.

Restoration includes actions such as:

- Restoring water flow to floodplains and wetlands
- Rebuilding depleted oyster reefs
- Removing obsolete dams, culverts, and other obstacles to allow fish passage
- Replanting salt marsh and seagrasses

Investing in restoration provides long-lasting benefits to local economies, such as higher property values, better water quality, sustainable fisheries, and more tourism dollars.

Annual economic value of the Delaware Estuary Watershed¹⁴



Need local jobs? Restoration jobs can't be exported

Restoration of our coasts and estuaries involves active, on-the-ground work, which requires skills and machinery available in the local workforce. The jobs are inherently local and cannot be exported. During 2010, restoration efforts for the Chesapeake Bay, Great Lakes, and Everglades **contributed \$427 million in economic output and supported more than 3,200 jobs.**¹⁵

"We are delivering planning and design solutions that are helping to restore the ecological health of our coasts and estuaries. Not only do habitat restoration projects strengthen our business and improve the environment, but we see first-hand their positive impact on communities and to the nation's economic prosperity."

– Steve Lavinder,
Vice President of
CH2M HILL



Restoration in New Orleans creating hundreds of jobs

The Central Wetlands Unit (CWU) is a 30,000-acre expanse of degraded marsh near downtown New Orleans. Saltwater intrusion from the Gulf of Mexico killed the cypress trees that once filled the area.

Now the CWU is being revitalized. The \$72-million project is on track to **create 280 direct jobs and 400 indirect and induced jobs, for a total of 680 jobs** over the project's life.

In the long term, New Orleans will see new jobs in ecosystem management, recreation, and tourism. The project will also help protect the city by acting as a flood and storm surge "sponge," taking pressure off manmade systems.

The restoration project has four stages.

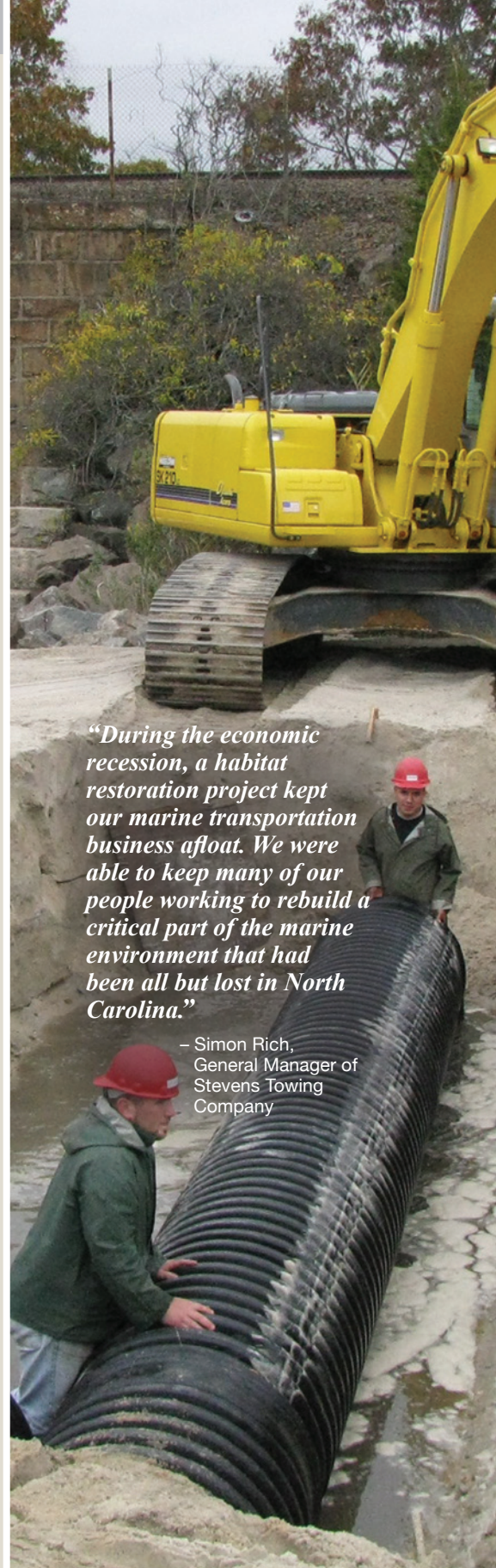
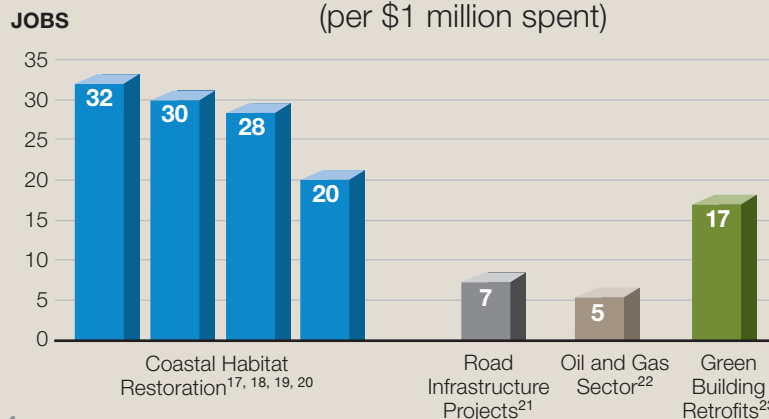
Phase 1, site preparation, is on track to create about 55 direct jobs. Dredging and filling are labor-intensive activities. Spending in the community will create 52 indirect and induced jobs, for a total of 107 jobs. This phase is expected to cost about \$3.7 million and produce about 29 jobs per \$1 million.

Phase 2, pipeline construction, to bring treated wastewater to the CWU, will cost about \$11 million and create about 67 direct and 107 indirect and induced jobs. This is about 16 jobs per \$1 million, in line with other economic activities like green building retrofits, estimated at 17 jobs per \$1 million.

Phase 3, tree planting, will create about 44 direct jobs and 59 indirect and induced jobs. Even with seedlings making up 83% of the budget, this phase still creates about 5 jobs per \$1 million.

Phase 4, operations and maintenance, will create 114 jobs for nutria control, pipeline repair, and landscaping over a 10-year period. This will lead to 181 indirect and induced jobs. This is about 8 jobs per \$1 million spent, a third more than the oil and gas sector, which creates about 5 jobs for each \$1 million spent.¹⁶

Habitat restoration creates more jobs
(per \$1 million spent)



"During the economic recession, a habitat restoration project kept our marine transportation business afloat. We were able to keep many of our people working to rebuild a critical part of the marine environment that had been all but lost in North Carolina."

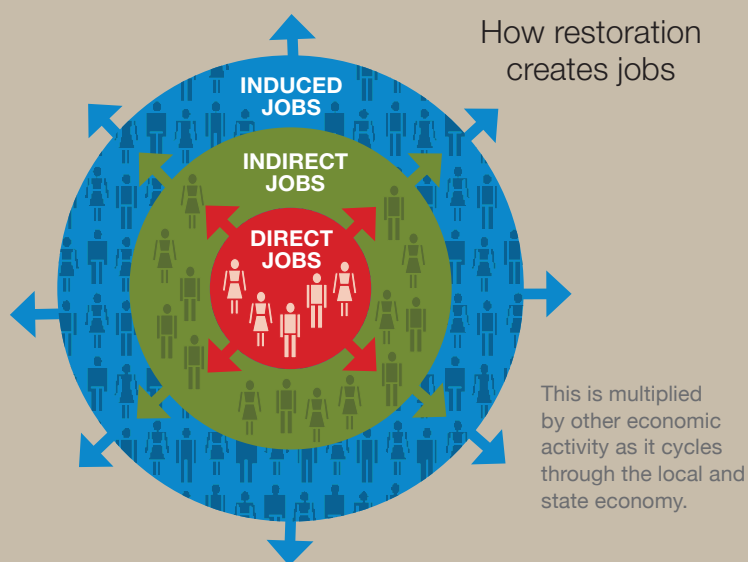
– Simon Rich,
General Manager of
Stevens Towing
Company

Investing in restoration helps distressed economic region in Maine

In Maine, a project is underway to remove the Great Works Dam and improve access to nearly 1,000 miles of historic fish habitat on the Penobscot River. The project will yield nearly \$5 million in jobs for construction workers, technical experts such as engineers, and local businesses such as nurseries, for a total of 155 to 188 direct and indirect jobs. This provides an economic benefit to a region that has been severely stressed by the economic downturn. It will **create direct and indirect jobs for between 155 and 188 people**: construction workers, technical experts such as engineers, and local businesses such as nurseries.

Long-term ecological and environmental benefits:

- Increase yearly Atlantic salmon from less than 1,000 fish today to the 10,000-12,000 range
- Increase herring from a few thousand to several million fish, and American shad from near zero to 1.5 million annually
- Provide new water-related tourism, such as canoeing, fishing and river festivals²⁴



Restoration improves coastal habitats and helps local economies by supporting jobs. Three different types of jobs are created: direct, indirect, and induced.

DIRECT JOBS: People using their skills to restore damaged wetlands, shellfish beds, coral reefs and fish passages.

INDIRECT JOBS: Jobs in industries that supply materials for restoration projects, such as lumber, concrete and nursery plants.

INDUCED JOBS: Jobs in businesses that provide local goods and services, such as clothing and food, to people working on restoration projects.

“Hunting and fishing is about an \$80 billion per year industry, which means an investment in coastal restoration is also an investment in our nation’s economy.”

– Dale Hall,
CEO of Ducks Unlimited



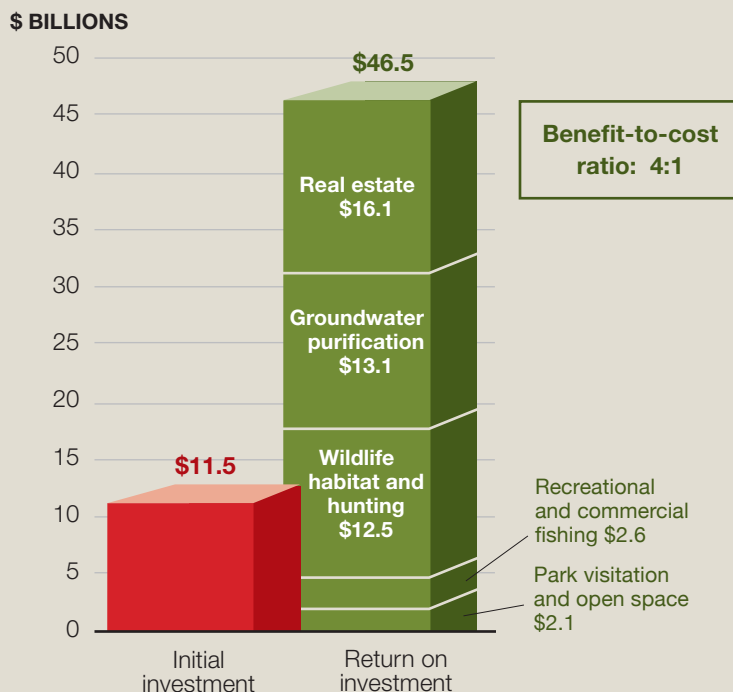
Everglades restoration: a 4-to-1 return on investment

In south Florida, a major effort is underway to restore the Everglades. Over the past century, the construction of canals and levees for cities and agriculture has led to the loss of over 50% of these significant wetlands.

Restoration will have big benefits for the Florida economy, such as:

- Protection of water supply, greater availability of freshwater and reduced costs to purify water, worth \$13.1 billion
- Increased property values due to higher water quality in waterways and groundwater, worth \$16.1 billion
- More park visitation and tourism due to a healthier ecosystem, worth \$2.1 billion
- More fishing and hunting as wildlife populations increase, worth \$15.1 billion
- An additional 440,000 jobs over the next 50 years²⁵

Return on investment of
Everglades restoration



“One cannot overstate the value of preserving our natural systems for the protection of people and property from catastrophic events.”

– Frank Nutter,
President of the
Reinsurance
Association of America

Michigan restoration project: a 6-to-1 return on investment

Restoring Muskegon Lake, on the east shore of Lake Michigan, will generate more than \$66 million in economic benefits for its \$10 million investment. That's a 6-to-1 return on investment over a 10-year period. The project will generate:

- A \$12 million increase in property values
- Up to \$600,000 in new tax revenue annually
- Over \$1 million in new recreational spending annually
- Nearly 65,000 additional visitors each year
- \$66 million in economic benefits over ten years
- More than a 6-to-1 return on investment

The restoration project will remove 180,000 tons of unnatural fill from the lake and restore several miles of shoreline habitat.²⁶

North Carolina wetland restoration opens shellfish beds closed to harvesting for decades

North River Farms is the largest wetland restoration project ever attempted in North Carolina. When it's complete, the project will restore about 6,000 acres of wetlands and streams. Turning farm fields back to wetlands will lead to the reopening of nearby shellfish waters. The state's shellfish industry is worth more than \$80 million a year.²⁷

Farm runoff is the main reason for the high levels of bacteria that forced the state to close shellfish beds in part of the river and adjacent creeks. The newly created wetlands are restoring the land's natural drainage. Wetlands slow down, filter, and treat contaminated runoff. Much of the bacteria and other pollutants are being naturally removed before entering the river.

In large part as a result of the ongoing project, the state of North Carolina opened 209 acres of previously closed oyster beds in North River and Ward Creek, a tributary of the river.²⁸





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Restore America's Estuaries is a national 501(c)(3) nonprofit organization established as an alliance of eleven community-based conservation organizations working together to protect and restore the vital habitats of our nation's estuaries.



Endnotes

¹ http://oceanservice.noaa.gov/websites/retiredsites/natdia_pdf/3hinrichsen.pdf

² Feierabend, S.J. and J.M. Zelazny. 1987. Status Report on our Nation's Wetlands. National Wildlife Federation: Washington, DC.

³ <http://www.estuaries.org/experts-say-us-coasts-and-estuaries-contribute-billions-to-economy-but-much-at-risk.html>

⁴ http://www.jointoceancommission.org/resource-center/1-Reports/2011-06-07_JOCI_Americas_Ocean_Future.pdf

⁵ http://stateofthecoast.noaa.gov/coastal_economy/welcome.html

⁶ http://www.jointoceancommission.org/resource-center/1-Reports/2011-06-07_JOCI_Americas_Ocean_Future.pdf

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⁸ <http://lacoast.gov/new/Data/Ed/NewHistoricalland.pdf>

⁹ <http://chesapeakebay.noaa.gov/oysters/oyster-restoration>

¹⁰ http://www.newworldencyclopedia.org/entry/Salmon#Environmental_pressures

¹¹ <http://www.estuaries.org/habitat-loss-nationwide.html>

¹² Ibid.

¹³ <http://www.glc.org/habitat/>

¹⁴ http://www.delawareestuary.org/pdf/NatCap/estuary_economic_value.pdf

¹⁵ <http://www.doi.gov/news/pressreleases/Interior-Programs-Supported-2-Million-Jobs-Nationwide-Contributed-363-Billion-in-Economic-Output-during-2010.cfm>

¹⁶ <http://blogs.edf.org/restorationandresilience/category/central-wetlands-unit/>

¹⁷ NOAA Restoration Center; ARRA Economic Impact Summary Report (In preparation)

¹⁸ http://www.doi.gov/news/pressreleases/2010_02_23_release.cfm

¹⁹ http://www.americanprogress.org/issues/2011/02/pdf/beyond_recovery.pdf

²⁰ <http://wilderness.org/files/Green-Jobs-Fact-Sheet.pdf>

²¹ http://www.bikeleague.org/resources/reports/pdfs/baltimore_Dec20.pdf

²² http://www.americanprogress.org/issues/2011/02/pdf/beyond_recovery.pdf

²³ http://adpartners.org/tables/Job_Creation_for_Investment_-_Garrett-Peltier.pdf

²⁴ <http://asf.ca/news.php?id=406>, <http://www.habitat.noaa.gov/hlpenobscotriver.html>

²⁵ http://everglades.3cdn.net/79a5b78182741ae87f_wvm6b3vhn.pdf

²⁶ <http://healthylakes.org/great-lakes-restoration-initiative/new-study-michigan-restoration-project-to-provide-6-to-1-return-on-investment/>

²⁷ <http://hamptonroads.com/2008/06/nc-fishing-industry-feels-strain-reduced-harvests>

²⁸ <http://www.nccoast.org/restoration-education/north-river-farms.asp>

²⁹ <http://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/downloads/WP24.pdf>

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