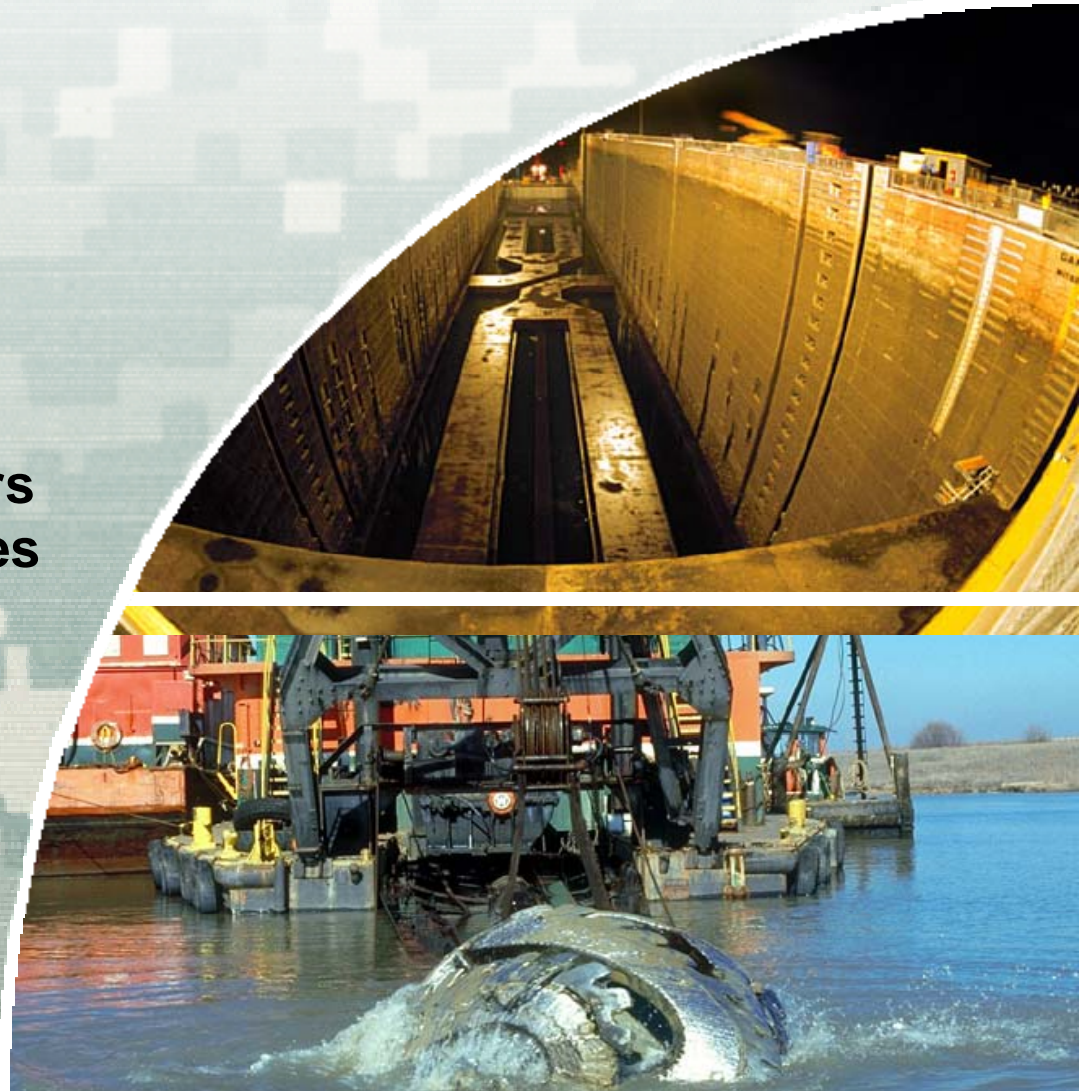


Tourism, Inland Ports and Waterways, Services to Ships and Navigation Control

Kevin Knight
Economist
US Army Corps of Engineers
Institute for Water Resources
19 June 2014



US Army Corps of Engineers
BUILDING STRONG



Corps Civil Works Value to the Nation

**Recreation areas:
370 M Visitors/yr
Generate \$16B in
economic activity,
270,000 jobs**



**1/4 of Nation's
Hydropower:
\$1.5B + in
power sales**



**12,000 miles of
Commercial Inland
Waterways transport
goods at
1/2 the cost of rail or
1/10 the cost of trucks**



**926 Shallow &
Deep Draft
Harbors**



**#1 Federal Provider
Of Outdoor Recreation
54,879 Miles Of Shoreline
at USACE Lakes**



**Stewardship of
12 Million Acres
Public Lands**

**~14,500 Miles of
Levees**



**Emergency
Operations**



**Regulatory
Responsibilities**



**US Ports & Waterways Convey > 2.37 billion Tons Commerce
Corps Maintained Ports Provide Strategic Deployment Capability
Harbor Maintenance Trust Fund collects \$1.7 billion revenue**

**137 Major Environmental
Restoration Projects**



BUILDING STRONG®

Corps Navigation Mission

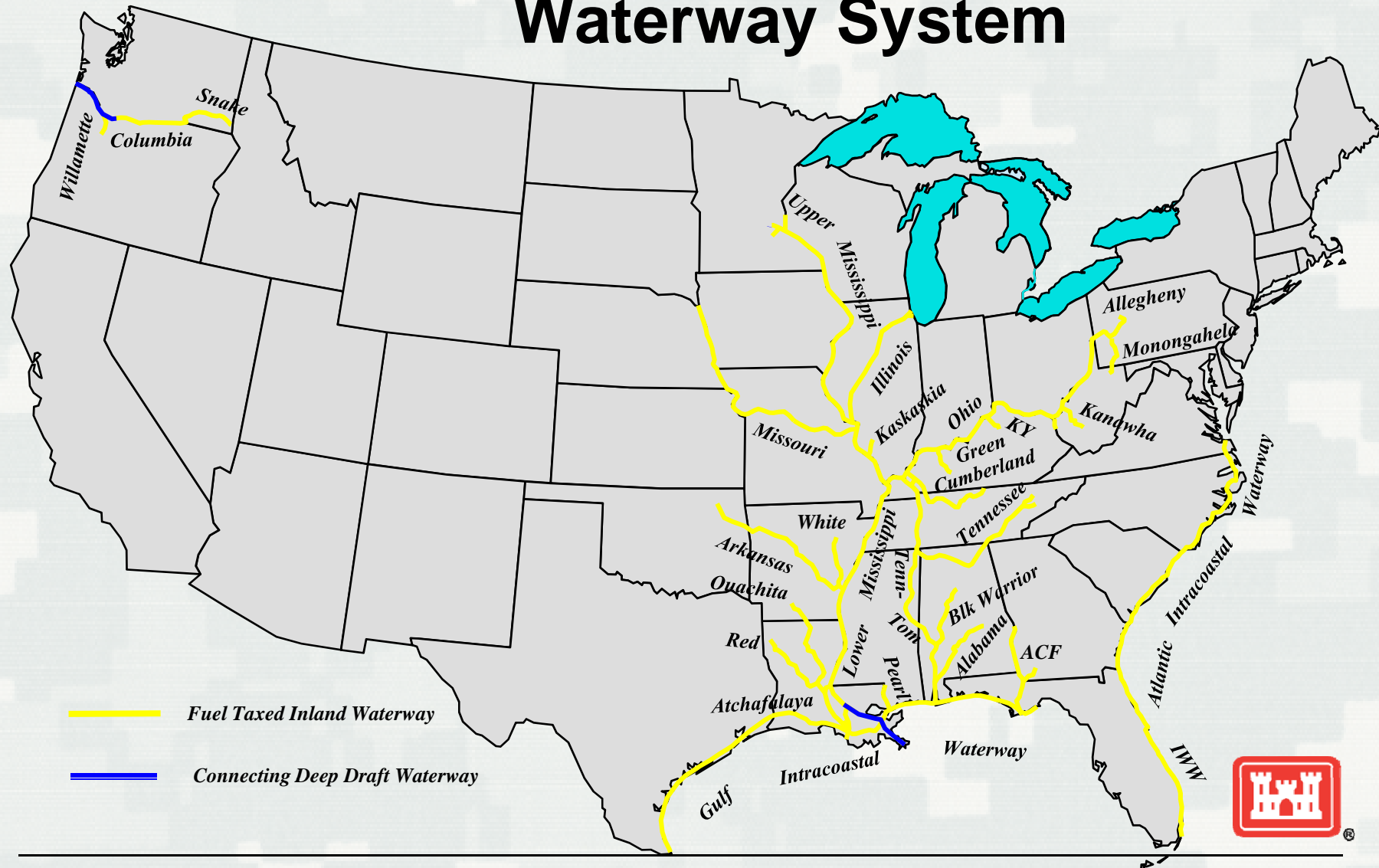
Provide safe, reliable, efficient, effective and environmentally sustainable waterborne transportation systems for movement of commerce, national security needs, and recreation.





The U.S. Navigation System



The Defined Inland and Intracoastal Waterway System



 Fuel Taxed Inland Waterway
 Connecting Deep Draft Waterway



BUILDING STRONG®

USACE Navigation Assets

COASTAL NAVIGATION

1,067 Navigation projects
19 Lock chambers
13,000 Miles of channels
929 Navigation structures
844 Bridges

INLAND NAVIGATION

27 Inland River Systems
207 Lock chambers @ 171 lock sites
12,000 Miles of inland river channels



BUILDING STRONG®

Navigation Partners

- Federal agencies: DOT – MARAD, USACE, USCG, NOAA, Fed. Railroad Administration, Fed. Highway Administration, environmental agencies (EPA, U.S. Fish and Wildlife Service, National Marine Fisheries Service) and other agencies
- Navigation industry: Inland Waterways Users Board, Waterways Council, Inc. (WCI), National Waterways Conference (NWC), American Waterways Operators (AWO)
- Ports, Terminals, Shippers: national and regional waterway organizations/associations (AAPA)(NWPA)
- National and regional environmental organizations
- Dredging contractors (DCA), in addition to USACE Dredges



International Coordination

- International Association of Navigation Congresses (PIANC)
 - <http://www.pianc.org>
- International Maritime Organization (IMO)
 - <http://www.imo.org>
- International Association of Dredging Contractors (IADC)
- World (Western) Dredging Association



Current Infrastructure Situation

- Keeping Channels & harbors maintained to authorized dimensions
- Infrastructure is wearing out faster than it can be replaced or rehabilitated.
- Decreasing reliability of locks & other navigation infrastructure impedes transportation of goods.
- A direct relationship exists between increasing age and increasing needs for maintenance, rehabilitation, replacement and repurposing.
- 21st Century needs are different or greater than those of the last century.



Navigation Trust Funds

Inland Waterways (Fuel Taxed)

O&M	Federal Government	100%
Construction	Federal Government	50%
	Inland Waterways TF	50%

Coastal/Harbors

O&M	Federal Government	0%
	Harbor Maintenance TF	100%
Construction	Federal Government	40-80%
	Project Sponsors	20-60%



Corps of Engineers Reporting Requirements/Systems

www.Corpslocks.com



US Army Corps of Engineers
Lock Performance Monitoring System

Welcome to Corps Locks!

The Corps Locks website contains lock and vessel specific information derived from the United States Army Corps of Engineers Lock Performance Monitoring System (LPMS). The information contained here represents a half-hourly updated snapshot of Freedom of Information Act (FOIA) data on U.S. flag vessels and foreign vessels operating in U.S. waterways that transited a Corps-owned or operated lock structure. Detailed information on specific companies or commodities is considered privileged and is not included in the Corps Locks website.

Find a Vessel

Lock Queue Report

Lock Status Report

Tonnage Report

Data Web Services

River at a Glance



US Army Corps of Engineers
Lock Performance Monitoring System

Home > Monthly Tons Report

Instructions

This is a summarized tonnage report by month and lock for data for the current and previous calendar years. It will not work for earlier dates. This report is updated once a day at approximately 10:00AM. Please use the designated date format, do not use slashes or dashes.

Selection Criteria

Select River System: MI - MISSISSIPPI RIVER Select a Lock: 10 - LOCK AND DAM 10 Select Month and Year (MMYYYY): (No slashes)



Container Ship

The Container Ship, Regina Maersk, pushed through the Charleston Harbor, Charleston, South Carolina.

Website



Inside NDC

- About NDC
- Corps Locks
- Navigational Charts
- Waterway Data for Downloading
- Metadata
- Geographic Information Systems (GIS)
- EROC Codes
- The U.S. Waterway System Facts
- NDC Publications
- U.S. Waterways Monthly Indicators
- U.S. Foreign Waterborne Transportation Statistics Program

Latest Information

- Corps/Industry Weekly Report
- FY 2015 Preliminary Advertising Schedule ...
- FY 2014 Advertising Schedule ...
- Dredging Bar Charts
- FY 2014 COE Dredge Schedule ...
- FY 2014 Bid Abstracts ...
- FY 2014 Dredging Information ...
- Dredging Cost Analysis
- Dredging Statistics
- Key Lock Report
- Locks by Waterway, Tons Locked by Commodity Group
- Locks by Waterway, Lock Usage Calendar Year 1993-2013
- Locks by Waterway, Locks Unavailability, Calendar Years 1993-2013
- Summary of Lock Statistics by River

Technical Centers

- Institute for Water Resources
- Waterborne Commerce Statistics
- Risk Management Center
- Hydrologic Engineering Center



IWR Website Home Page



Transits through Corps Locks

	CY2010			CY2011			CY2012			CY2013		
	Total Vessels (#)	Recreational Vessels (#)	Commercial Vessels (#)	Total Vessels (#)	Recreational Vessels (#)	Commercial Vessels (#)	Total Vessels (#)	Recreational Vessels (#)	Commercial Vessels (#)	Total Vessels (#)	Recreational Vessels (#)	Commercial Vessels (#)
ALL USACE	855,136	377,231	468,359	798,316	333,217	455,457	807,812	318,123	481,096	771,096	292,094	471,032
GREAT LAKES AND OHIO RIVER DIV	262,269	93,722	164,851	242,941	77,205	162,010	247,809	81,093	163,689	240,092	75,708	161,172
MISSISSIPPI VALLEY DIVISION	329,459	135,278	191,762	303,025	118,788	181,564	297,356	111,610	183,345	270,516	95,752	172,664
NORTH ATLANTIC DIVISION	16,147	14,492	1,423	14,416	12,580	1,596	14,236	12,346	1,668	13,593	11,737	1,684
NEW YORK	4,077	3,909	116	2,946	2,806	93	3,412	3,176	181	3,186	2,809	310
NORFOLK	12,070	10,583	1,307	11,470	9,774	1,503	10,824	9,170	1,487	10,407	8,928	1,374
NORTHWESTERN DIVISION	58,128	38,865	18,318	56,065	37,241	17,801	57,276	37,892	18,565	55,160	35,880	18,387
PORTLAND	7,881	1,521	6,249	6,565	476	6,036	6,720	497	6,162	6,630	430	6,144
SEATTLE	43,742	36,075	6,905	43,514	35,711	6,907	44,058	36,320	7,034	42,504	34,485	7,233
WALLA WALLA	6,505	1,269	5,164	5,986	1,054	4,858	6,498	1,075	5,369	6,026	965	5,010
SOUTH ATLANTIC DIVISION	84,712	56,340	27,210	68,220	41,670	25,672	73,513	44,806	27,518	71,918	43,071	28,060
JACKSONVILLE	48,109	42,446	4,902	33,345	29,132	3,738	38,310	33,059	4,596	37,897	33,109	4,356
MOBILE	36,603	13,894	22,308	34,875	12,538	21,934	34,883	11,527	22,845	34,021	9,962	23,704
WILMINGTON	0			0			320	220	77	0		
SOUTHWESTERN DIVISION	104,421	38,534	64,795	113,649	45,733	66,814	117,622	30,376	86,311	119,817	29,946	89,065
GALVESTON	83,617	34,315	49,302	91,845	41,051	50,794	93,917	26,371	67,544	94,551	26,753	67,798
LITTLE ROCK	15,792	3,331	11,557	16,165	3,548	11,741	17,759	3,200	13,795	18,652	2,102	15,866
TULSA	5,012	888	3,936	5,639	1,134	4,279	5,946	805	4,972	6,614	1,091	5,401



Riverboat Gambling



Steamboat Cruises





The NIÑA

Deck length - 65', Beam - 18', Draft - 7'
Tonnage - 75, Sail Area - 1919 sq ft

Pinta

Deck length - 85', Beam - 23', Draft - 7.5'
Tonnage - 101, Sail Area - 3800 sq ft





Redevelopment Projects





Recreation

- USACE is the largest provider of outdoor recreation in U.S.
- 456 lakes in 43 states
- 4,300 facilities
 - 93,000 campsites
 - 3,500 boat ramps
 - 5,100 trail miles
 - 12M acres
- 400 million visits a year by ~ 25 million people
- Supports 500,000 jobs & \$16B spending
- More than **90%** of the lakes are within 50 miles of a metropolitan area



Recreation.gov



National Park Service

The National Park Service preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

[National Park Service](#)

National Park Service
Reservations



Smithsonian Institution

The Smithsonian is committed to enlarging our shared understanding of the mosaic that is our national identity by providing authoritative experiences that connect us to our history and our heritage as Americans and to promoting innovation, research and discovery in science. These commitments have been central to the Smithsonian since its founding more than 155 years ago.

[Smithsonian Institution](#)



Tennessee Valley Authority

For more than seven decades, TVA has been improving the quality of life in the Tennessee Valley through its threefold mission of providing affordable and reliable power, promoting sustainable economic development, and acting as a steward of the Valley's natural resources. Welcome to the TVA web site, where you'll find information about the many ways in which TVA fulfills these responsibilities. We hope you find the site informative.

[Tennessee Valley Authority](#)



Fish and Wildlife Service

The Fish and Wildlife Service's mission is, working with others, to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.

[Fish and Wildlife Service](#)

Fish and Wildlife Service
Reservations



US Army Corps of Engineers

The United States Army Corps of Engineers (USACE) serves the Armed Forces and the Nation by providing vital engineering services and capabilities, as a public service, across the full spectrum of operations from peace to war in support of national interests.

[US Army Corps of Engineers](#)

US Army Corps of Engineers
Reservations



US Forest Service

Established in 1905, the Forest Service is an agency of the U.S. Department of Agriculture. The Forest Service manages public lands in national forests and grasslands. Gifford Pinchot, the first Chief of the Forest Service, summed up the mission of the Forest Service: "to provide the greatest amount of good for the greatest amount of people in the long run." National forests and grasslands encompass 193 million acres of land, which is an area equivalent to the size of Texas.

[US Forest Service](#)

US Forest Service
Reservations



Search for Places & Activities [x]

Where?

ALEXANDRIA, VA, USA

Interested in

Camping & Lodging

Looking for

Tent

Occupants

more options...

Arrival date

Thu Jul 3 2014

Flexible for next 2 weeks

Length of stay: 3

Accessibility needs

Pets allowed

Search

Filter Your Results

Type

Camping & Day Use

Agency

National Park Service

First Letter of Name

- B (1)
- G (1)
- M (1)
- O (2)
- P (1)

Search Results

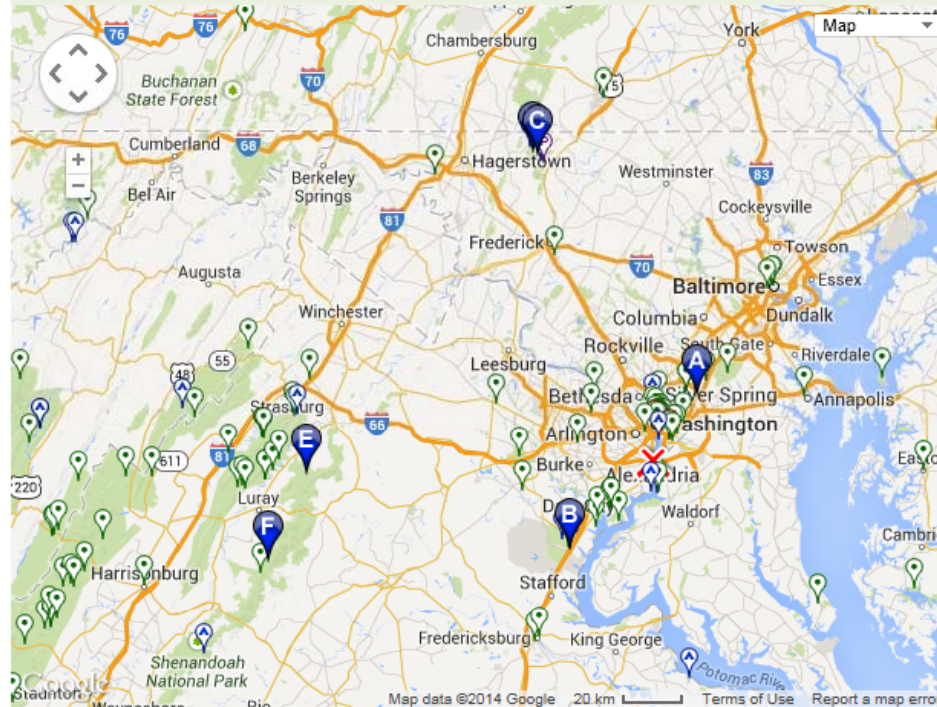
view as LIST

view as MAP

Search Results: 1-6 of 6

▲ Previous | Next ▼

Results near ALEXANDRIA, VA, USA
[* in straight line, not driving distance]



Search Results: 1-6 of 6

▲ Previous | Next ▼

Current Search Results:



Reservable Facility Available



Reservable Facility No Reservation Availability for your dates



Recreation Facility Visit its Detail page for possible booking info



Center Of Search 'Where' you are searching

Other Facilities and Areas:



Camping or Day Use



Tour Facility



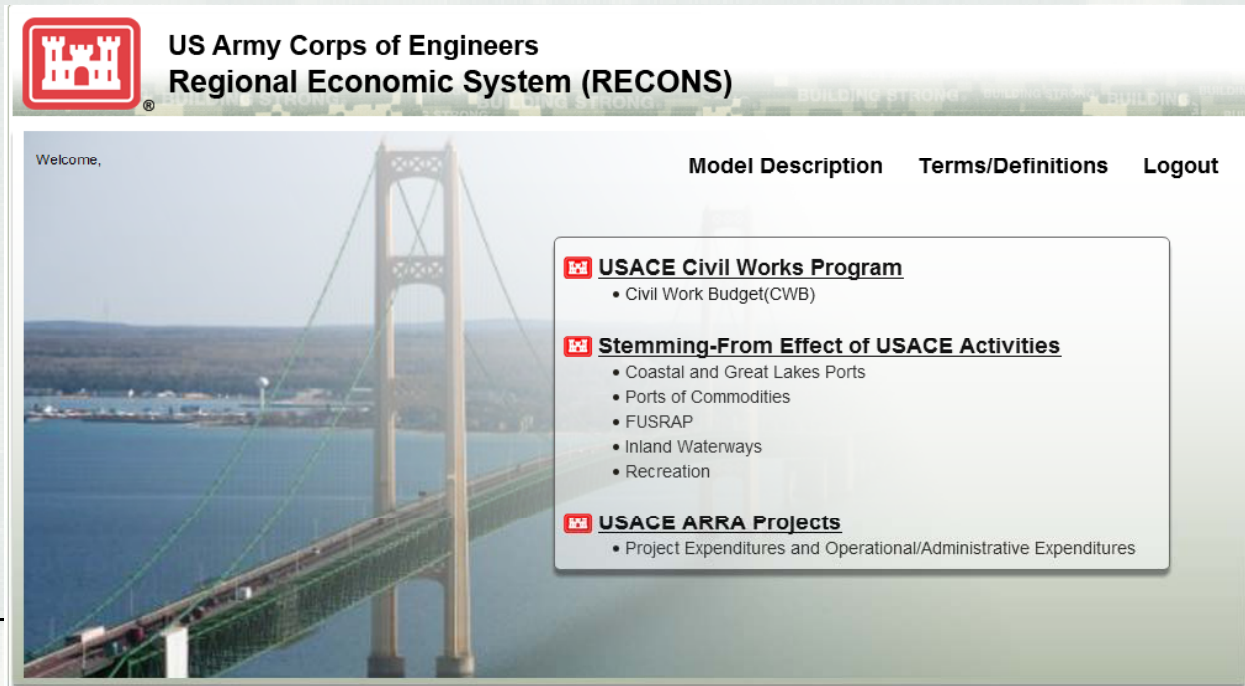
Recreation Facility



Permit Facility

Estimate Economic Impacts with RECONS

- The USACE's Institute for Water Resources recently developed an economic impact analysis tool, called Regional Economic System (RECONS) that provides accurate and estimates of local job creation and retention and other economic measures such as value added, income, and sales by adopting IMPLAN I-O Model. Model was certified in 2012.



The screenshot displays the RECONS web application interface. At the top left is the US Army Corps of Engineers logo, a red shield with a white castle. To its right, the text reads "US Army Corps of Engineers" and "Regional Economic System (RECONS)". Below the logo is a "Welcome," message. The main content area features a large background image of a suspension bridge over a body of water. On the right side of the interface, there are three menu items: "Model Description", "Terms/Definitions", and "Logout". A central panel contains three sections, each with a red icon and a title:

- USACE Civil Works Program**
 - Civil Work Budget(CWB)
- Stemming-From Effect of USACE Activities**
 - Coastal and Great Lakes Ports
 - Ports of Commodities
 - FUSRAP
 - Inland Waterways
 - Recreation
- USACE ARRA Projects**
 - Project Expenditures and Operational/Administrative Expenditures

RECONS Overview

- Economic Impacts of Direct Federal Spending on Local, State, and National Economies- Measures Direct, Indirect and Induced effects
 - Appropriated regular CW spending and ARRA projects
 - USACE employees and payroll
 - Operational and Administrative Expenditures
 - USACE contracted work
- Stemming-from Effects of USACE Programs
 - Infrastructure users
 - Industries who benefit from infrastructure maintained by USACE
- Also include carbon emissions impacts- total carbon emissions produced for emissions generated in the sector, and energy-related emissions associated with the production.



Direct Federal Spending on Navigation Program

- Project types in the Corps Navigation program include:
 - Placement Area Construction and Rehabilitation
 - Channel Maintenance and Improvements (Dredging)
 - Structural Activities for Channel Maintenance (does not include dredging)
 - Lock Construction of On-Site Features
 - Lock or Dam Gate Fabrication and Installation
 - New Construction or Major Repair of Navigation or Multi-Purpose Dams
 - Repair and Maintenance of Locks
 - Repair and Maintenance of Navigation or Multi-Purpose Dams
 - Construction and Repair of Large Stone Breakwaters and Jetties - Large Projects
 - Construction and Repair of Concrete /Wooden Breakwaters and Jetties



Demonstration of RECONS Functions and Capabilities Direct Federal Spending on Navigation Program

Select a Project

Search a project by:

Division

District

and/or

Primary state

Select (click) a project to view CW associated business lines (below)

BURNS WATERWAY HARBOR, IN	▲
CALUMET HARBOR AND RIVER, IL & IN	
CHICAGO HARBOR, IL	
CHICAGO RIVER, IL	
CHICAGO SANITARY AND SHIP CANAL DISPERSAL BARRIER, IL	
CHICAGO SANITARY AND SHIP CANAL, SECOND BARRIER, IL	
CHICAGO SHORELINE, IL	
DES PLAINES RIVER, IL	
DES PLAINES RIVER, IL (PHASE II)	▼

CHICAGO HARBOR, IL project is selected.

Select (click) a business line for review and/or analysis

▶ 2009
▶ 2010
▼ 2011
▼ Navigation (\$2,064,000)
OM (\$2,064,000)



Demonstration of RECONS Functions and Capabilities Direct Federal Spending on Navigation Program

Project Information:

Project ID 1002062
 Project Name CHICAGO HARBOR, IL
 MSC LRD
 District CHICAGO DISTRICT

Local Impact Area/Model (click on an item below to view it on the map)

Model ID	Name
17	Chicago Naperville Joliet IL IN WI MSA

State Impact Area/Model (click on an item below to view it on the map)

Model ID	Name
s20007	MSTATE IL IN WI

National Impact Area/Model

Impact Area Map
Local Impact Area Profile
State Impact Area Profile



Demonstration of RECONS Functions and Capabilities

Direct Federal Spending on Navigation Program

Review the percentage and amounts, and change them where desired		100.0%	\$2,064,000
Industry	Expenditure Item/Category	Percentage (%) *	Spending Amount (\$) **
115	Petroleum Refining	7.0	\$144,480
171	Metals and Steel Materials	2.4	\$49,536
198	Textiles, Lubricants, and Metal Valves and Parts (Dredging)	2.4	\$49,536
201	Pipeline Dredge Equipment and Repairs	5.9	\$121,776
26	Aggregate Materials	2.3	\$47,472
290	Hopper Equipment and Repairs	1.9	\$39,216
36	Construction of Other New Nonresidential Structures	12.7	\$262,128
365	Industrial and Machinery Equipment Rental and Leasing	5.8	\$119,712
375	Planning, Environmental, Engineering and Design Studies and Services	4.0	\$82,560
386	USACE Overhead	7.5	\$154,800
39	Repair and Maintenance Construction Activities	4.6	\$94,944
417	Industrial Machinery and Equipment Repair and Maintenance	11.8	\$243,552



Demonstration of RECONS Functions and Capabilities

Direct Federal Spending on Navigation Program

Economic Impact Results		Overall summary	Local summary by industry sector	State summary by industry sector	National summary by industry sector	Carbon Emissions		
Region	Local Capture	Direct Jobs	Direct Labor Income	Direct GRP	Total Output	Total Jobs	Total Labor Income	Total GRP
Local	\$1,691,500	14.91	\$931,365	\$1,130,245	\$3,346,137	25.14	\$1,483,655	\$2,082,668
State	\$1,804,922	15.70	\$1,010,614	\$1,223,873	\$3,513,164	27.79	\$1,566,718	\$2,182,251
National	\$2,012,877	16.47	\$1,065,025	\$1,303,334	\$5,498,921	37.13	\$2,115,711	\$3,099,805

Economic Impact Results		Overall summary	Local summary by industry sector	State summary by industry sector	National summary by industry sector	Carbon Emissions
Industry	Industry Name	Spending Amount	Output	Jobs	Labor Income	GRP
365	Commercial and industrial machinery and equipment rental and le...	\$119,712	\$118,695	0.30	\$29,658	\$55,293
375	Environmental and other technical consulting services	\$82,560	\$48,796	0.31	\$23,942	\$29,250
386	Business support services	\$154,800	\$150,036	1.46	\$75,242	\$101,183
39	Maintenance and repair construction of nonresidential structures	\$94,944	\$94,264	0.73	\$56,099	\$58,848
417	Commercial and industrial machinery and equipment repair and ...	\$243,552	\$234,391	1.14	\$77,712	\$152,382
439	* Employment and payroll only (federal govt, non-military)	\$315,792	\$236,844	1.69	\$208,503	\$236,844
5001	Labor	\$295,152	\$295,152	6.93	\$295,152	\$295,152
69	All other food manufacturing	\$29,513	\$13,839	0.04	\$2,780	\$3,583
	Secondary Impact		\$1,654,637	10.24	\$552,290	\$952,423
	Total Impact	\$2,064,000	\$3,346,137	25.14	\$1,483,655	\$2,082,668



Demonstration of RECONS Functions and Capabilities

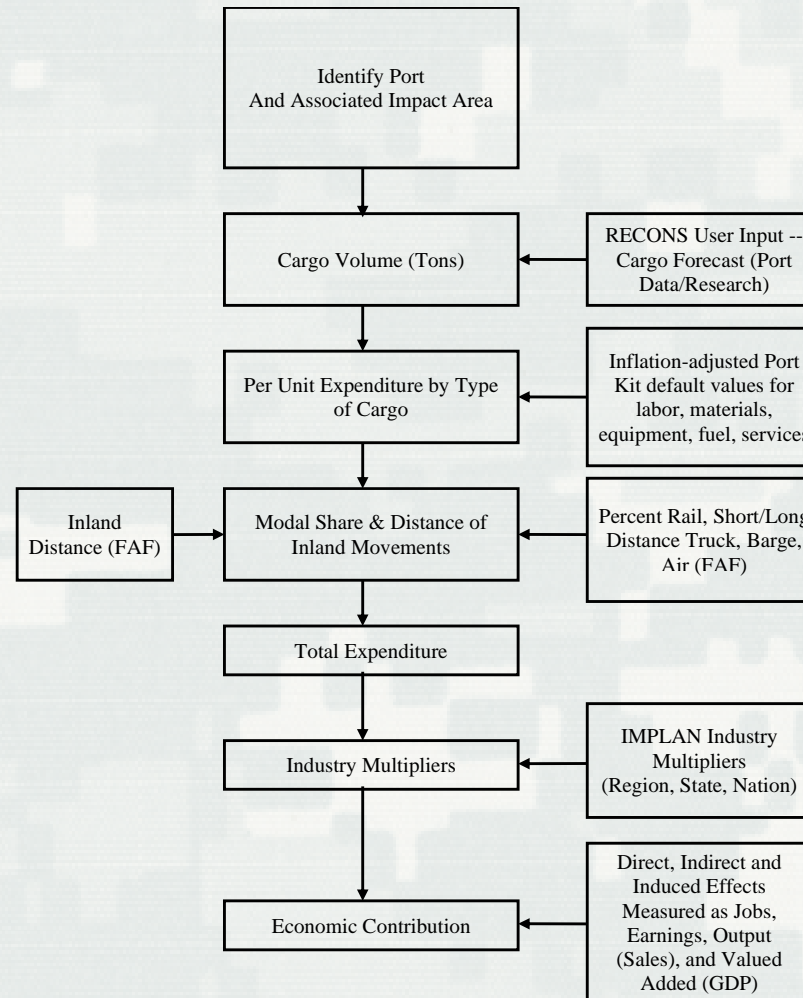
Direct Federal Spending on Navigation Program

- ▶ Data on CO2 intensities for different sectors of the economy were incorporated into model along with IMPLAN produced LPC's and multipliers to determine direct and secondary emissions.
- ▶ Data on direct energy-related CO2 emissions of each industry, the Government and Households is provided by the USEIA and USEPA.

Carbon Emission Estimates		Overall summary	Local summary by industry sector	State summary by industry sector	National summary by industry sector	Carbon Emissions		
Industry	Industry Name	Output Direct	Direct Emissions (Tons)	Output Indirect	Indirect Emissions: Domestic (Tons)	Indirect Emissions: Imports (Tons)	Total Indirect Emissions (Tons)	Total Direct and Indirect Emissions (Tons)
365	Commercial and industrial machinery and equipment rental ...	\$119,616	27.56	\$108,991	8.21	1.40	9.61	37.17
375	Environmental and other technical consulting services	\$82,560	0.72	\$54,033	2.96	0.65	3.61	4.32
386	Business support services	\$154,800	2.48	\$89,350	8.02	1.67	9.69	12.16
39	Maintenance and repair construction of nonresidential struct...	\$94,944	9.74	\$66,553	11.53	3.70	15.23	24.97
417	Commercial and Industrial machinery and equipment repair ...	\$243,552	2.37	\$128,051	21.24	11.08	32.32	34.70
439	* Employment and payroll only (federal govt, non-military)	\$315,792	0.00	\$0	0.00	0.00	0.00	0.00
69	All other food manufacturing	\$25,992	3.39	\$35,865	9.58	2.53	12.11	15.50
	Total	\$1,717,725	253.93	\$1,110,964	184.70	73.86	258.57	512.50



Demonstration of RECONS Functions and Capabilities Stemming-from Effect – Port Model



Economic Impacts of Waterways



1. Economic Impacts of Dredging Related Spending

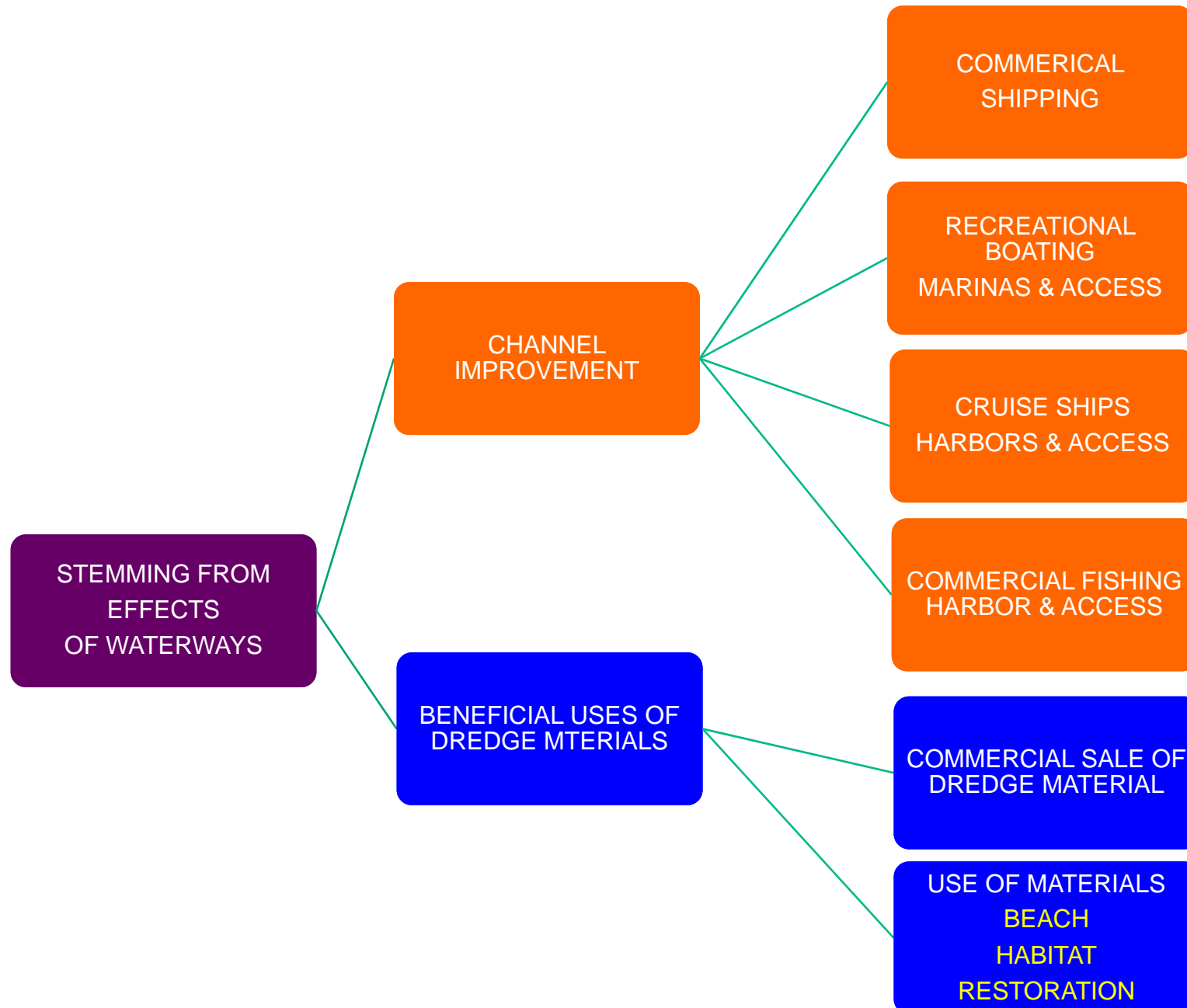


- 2.1 Commercial Use of Dredged Materials
- 2.2 Beneficial Re-use of Dredged Materials



3. Stemming From Economic Impacts
 - 3.1 Enhanced Shipping Capacity
 - 3.2 Cruise Ships
 - 3.3 Marinas
 - 3.4 Commercial Fishing

Stepping-From Economic Impacts of Dredging



Demonstration of RECONS Functions and Capabilities

Stem-from Effect – Recreation use

Select a Project

Search and identify a project

Division

District

or

State

NRMSID	Select (click) a project for review and/or analysis
M274786	AQUILLA LAKE
M200930	BARDWELL LAKE
M201330	BELTON LAKE
M201350	BENBROOK LAKE
M202590	CANYON LAKE
M203820	COOPER DAM AND JIM CHAPMAN LAKE
M205850	FERRELLS BRIDGE DAM - LAKE O' THE PINES
M275357	GRANGER DAM AND LAKE
M206760	GRAPEVINE LAKE
M207710	HORDS CREEK LAKE
M209420	JOE POOL LAKE
M209580	LAVON LAKE
M209740	LEWISVILLE DAM AND LAKE
M212260	NAVARRO MILLS LAKE
M275358	NORTH SAN GABRIEL DAM AND LAKE GEORGETOWN
M216090	O C FISHER DAM AND LAKE
M214580	PROCTOR LAKE
M274767	RAY ROBERTS LAKE
M216040	SAM RAYBURN DAM AND RESERVOIR

COOPER DAM AND JIM CHAPMAN LAKE is selected.



Demonstration of RECONS Functions and Capabilities

Stem-from Effect – Recreation use

Project Information:

NRMSID K500220
 Project Name ALLATOONA LAKE
 MSC SAD
 District MOBILE
 State GA

Select year of expenditure (* required)

Year of Expenditure	Total Number of Visits	Number of Marina Slips	Number of Docks
2009	5,281,347	3,690	1,522

Year 2009 data is selected.

Local Impact Area/Model [click on an item below to view it on the map]

NRMSID	Name
K500220	30 Miles region around ALLATOONA LAKE

State Impact Area/Model [click on an item below to view it on the map]

Model ID	Name
s10011	Georgia

Impact Area Map
Local Impact Area Profile
State Impact Area Profile

Map
Satellite
Hybrid
Terrain

Map data ©2013 Google - Terms of Use

POWERED BY Google

The maps included in RECON are produced using Google Map API and they are intended to aid users in visualizing the different economic impact areas in relationship to project locations.



Demonstration of RECONS Functions and Capabilities

Stem-from Effect – Recreation use


Project Info | Review and Change Visitation Data | Review and Change Spending Profiles | Review and Change Total Spending | Review Economic Impact

Project Name **ALLATOONA LAKE**

Total Number of Visits **5,281,346**

Year **2013**

Type of Analysis Economic Significance Analysis Economic Impact Analysis

Review the percentage and amounts, and change them where desired 


Visitor Segments	Percentage of Annual Visits *	Total Number of Person Visits or Trips	Party Size	Party Visits
Local - Boater	19.0	1,003,456	2.71	370,278
Local - Non-Boater	36.9	1,954,098	2.71	721,069
Day Users - Boater	13.0	686,575	2.71	253,348
Day Users - Non-Boater	26.0	1,373,150	2.71	506,697
Camper - Boater	0.0	0	3.80	0
Camper - Non-Boater	0.9	52,813	3.80	13,898
Overnight - Boater	0.0	0	2.71	0
Overnight - Non-Boater	4.0	211,254	2.71	77,953

* Percentage should sum to 100% 100.0% 5,281,346 1,943,246



Demonstration of RECONS Functions and Capabilities

Stem-from Effect – Recreation use

Average Daily Party Trip Spending by Segment (\$ per party per day) 

Spending Category	Visitor Segments							
	Local Boat	Local NonBo	Day Users Boater	Day Users NonBoate	Camper Boater	Camper NonBoa	Overnight Boater	Overnight NonBoate
Hotel	0.00	0.00	0.00	0.00	4.72	2.25	43.86	46.73
Camp	0.00	0.00	0.00	0.00	14.58	22.97	0.18	0.26
Restaurants and Bars	6.92	4.78	8.29	8.30	15.25	26.26	34.58	40.64
Groceries	9.30	4.42	6.52	3.40	22.52	16.81	20.42	11.59
Gas and oil	15.21	5.64	16.91	5.64	20.64	16.82	25.89	13.85
Other auto expenses	0.30	0.07	0.61	0.07	0.76	3.89	0.25	1.87
Other boat expenses	3.87	0.39	16.32	0.39	8.20	0.73	12.75	0.54
Attractions/Entertainment	0.58	1.91	0.74	1.91	5.82	22.02	13.45	34.72
Sporting goods	4.72	3.50	8.99	2.07	2.84	4.22	5.04	2.54
Souvenirs/other	2.10	2.78	9.32	2.78	4.77	11.86	10.35	22.75

Spending per trip per day \$ 43.00 \$ 23.49 \$ 67.70 \$ 24.56 \$ 100.10 \$ 127.83 \$ 166.76 \$ 175.48

0%

Reset spending profile


Instructions for using the slider...

View total spending 



Demonstration of RECONS Functions and Capabilities

Stem-from Effect – Recreation use

Total Spending by Segment and Spending Category (\$ thousands) 

Total Spending (\$ Thousand)

Spending Category	Local Boater	Local Non-Boater	Day Users Boater	Day Users Non-Boater	Camper Boater	Camper Non-Boater	Overnight Boater	Overnight Non-Boater	Total
Hotel	0.0	0.0	0.0	0.0	0.0	28.1	0.0	3,642.8	3,670.9
Camp	0.0	0.0	0.0	0.0	0.0	287.3	0.0	20.3	307.6
Restaurants and Bars	2,562.3	3,437.4	2,100.3	4,205.6	0.0	328.5	0.0	3,168.0	15,802.1
Groceries	3,443.6	3,178.5	1,651.8	1,722.8	0.0	210.3	0.0	903.5	11,110.5
Gas and oil	5,631.9	4,055.8	4,284.1	2,857.8	0.0	210.4	0.0	1,079.7	18,119.7
Other auto expenses	111.1	50.3	154.5	35.5	0.0	48.7	0.0	145.8	545.9
Other boat expenses	1,433.0	280.5	4,134.7	197.6	0.0	9.1	0.0	42.1	6,096.9
Attractions/Entertainment	214.8	1,373.5	187.5	967.8	0.0	275.4	0.0	2,706.5	5,725.5
Sporting goods	1,747.7	2,516.9	2,277.6	1,048.9	0.0	52.8	0.0	198.0	7,841.9
Souvenirs/other	777.6	1,999.2	2,361.2	1,408.6	0.0	148.4	0.0	1,773.4	8,468.4
Total	15,922.0	16,892.1	17,151.7	12,444.5	0.0	1,599.0	0.0	13,680.1	77,689.3



Demonstration of RECONS Functions and Capabilities

Stem-from Effect – Recreation use

						Local	State	National	Carbon Emissions
Label	Industry Sectors	Output (thousand \$)	Jobs	Labor Income (thousand \$)	Value Added (thousand \$)				
Direct Impact									
	Motel, hotel cabin or B&B	3,671	31.8	1,267	2,309				
	Camping fees	308	3.1	113	162				
	Restaurant/bar	15,802	237.1	5,706	8,515				
	Local transportation	546	5.7	213	314				
	Recreation	6,097	123.0	2,574	3,691				
	Entry/Use fees	5,726	45.8	1,148	2,018				
	Local Manufactures	2,423	7.5	591	778				
	Grocery stores	3,000	42.5	1,272	1,948				
	Gas stations	3,986	34.5	1,192	2,751				
	Other retails	6,361	104.6	2,648	4,138				
	Wholesale Trade	3,970	15.4	1,521	2,627				
Secondary Impact		41,571	263.6	13,893	24,918				
Total Impact		93,460	914.5	32,138	54,170				



Demonstration of RECONS Functions and Capabilities

Stem-from Effect – Recreation use

<div style="display: flex; justify-content: space-around; border-bottom: 1px solid black;"> Local State National Carbon Emissions </div>					
Label	IndustrySector	Output (thousand \$)	Jobs	Labor Income (thousand \$)	Value Added (thousand \$)
Direct Impact					
	Motel, hotel cabin or B&B	3,671	37.3	1,267	2,309
	Camping fees	308	3.1	115	166
	Restaurant/bar	15,802	268.1	5,706	8,515
	Local transportation	546	6.5	213	314
	Recreation	6,097	106.0	2,690	3,040
	Entry/Use fees	5,726	46.6	1,198	2,108
	Local Manufactures	22,119	42.8	3,707	5,075
	Grocery stores	3,000	46.4	1,273	1,948
	Gas stations	3,986	40.8	1,209	2,751
	Other retails	6,361	108.9	2,652	4,138
	Wholesale Trade	4,014	19.2	1,538	2,656
Secondary Impact		118,107	598.2	33,378	59,356
Total Impact		190,781	1,360.0	55,213	93,647



Demonstration of RECONS Functions and Capabilities

Stem-from Effect – Recreation use

		Local	State	National	Carbon Emissions				
Industry	Industry Name	Output Direct	Direct Emissions (Tons)	Output Indirect	Indirect Emissions: Domestic (Tons)	Indirect Emissions: Imports (Tons)	Total Indirect Emissions (Tons)	Total Direct and Indirect Emissions (Tons)	
115	Petroleum refineries	\$22,864	8.82	\$120,571,8	9,278,596,8	10,222,656	19,501,252	19,501,252,9	▲
311	Sporting and athletic goods manufacturing	\$95,285	6.67	\$10,035,68	2,532,294,7	1,043,163,7	3,575,457,8	3,575,457,86	
317	All other miscellaneous manufacturing	\$729,545	54.39	\$12,951,57	3,077,035,2	1,305,322,6	4,382,357,9	4,382,358,04	
319	Wholesale trade businesses	\$3,978,722	420.73	\$6,204,146	538,589,47	116,579,44	655,168,92	655,169,341.	
324	Retail Stores - Food and beverage	\$3,008,458	495.39	\$14,280,53	1,059,842,6	183,327,18	1,243,169,2	1,243,169,71	
326	Retail Stores - Gasoline stations	\$3,993,902	657.65	\$20,256,71	1,503,369,4	260,046,77	1,763,416,2	1,763,416,92	
328	Retail Stores - Sporting goods, hobby, book and music	\$3,063,287	504.41	\$14,454,82	1,072,777,2	185,564,71	1,258,342,2	1,258,342,71	
329	Retail Stores - General merchandise	\$3,311,203	545.24	\$17,487,49	1,297,849,9	224,496,82	1,522,346,7	1,522,347,28	
336	Transit and ground passenger transportation	\$6,098,701	2,604.64	\$59,431,13	22,806,908	2,557,219,6	25,364,128	25,364,131,1	
410	Other amusement and recreation industries	\$5,759,859	1,295.10	\$62,668,75	6,813,385,7	1,607,985,2	8,421,371,2	8,421,372,51	
411	Hotels and motels, including casino hotels	\$3,674,036	1,888.00	\$20,813,54	625,226,31	141,588,86	766,815,17	766,817,064.	
412	Other accommodations	\$339,511	169.55	\$181,284,7	5,292,097,8	1,198,449,4	6,490,547,2	6,490,716,90	
413	Food services and drinking places	\$15,847,89	1,602.10	\$465,182,6	76,652,658	18,367,431	95,020,089	95,020,090,8	▼



Demonstration of RECONS Functions and Capabilities

Stem-from Effect – Recreational Boating Model

Spending Profile

Marina Model - Spending Profiles

Spending Category	Boating Trip Spending (\$) - Per Boat Per Day By Boat Size		
	<20ft	20-30ft	30+ft
Lodging	2.2	6.1	1.3
Marina services	4.7	6.0	10.8
Restaurant	17.6	21.4	14.3
Groceries	13.7	19.4	26.4
Boat fuel	46.7	62.5	63.0
Auto fuel	9.0	9.0	6.4
Repair & Maintenance	0.0	0.0	0.0
Marine supplies	1.1	4.6	1.7
Recreation & Entertainment	1.2	1.5	1.5
Shopping	14.7	18.5	27.3

Adjust Spending Opportunities: 0% Reset

Spending Category	Annual Craft Spending (\$) Per Boat By Boat Size		
	<20ft	20-30ft	30+ft
Slip	0.0	1669.8	3168.6
Loan Payments	1000.0	1300.0	2000.0
Motors	34.0	36.0	39.0
Trailers	17.0	15.0	9.0
Insurance	275.2	453.4	963.4
Repairs	373.7	745.3	1920.8
Accessories	706.0	890.0	2300.0

Adjust Spending Opportunities: 0% Reset



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Demonstration of RECONS Functions and Capabilities

Stem-from Effect – Recreational Boating Model

Total Spending

Spending Category	Total estimated trip spending by different size of boats kept at the marina.(\$ Thousand)		
	<20ft	20-30ft	30+ft
Lodging	6	6	0
Marina services	12	6	1
Restaurant	44	22	1
Groceries	34	20	2
Boat fuel	117	66	6
Auto fuel	23	9	1
Repair & Maintenance	0	0	0
Marine supplies	3	5	0
Recreation & Entertainment	3	2	0
Shopping	37	19	2

Spending Category	Total estimated annual craft spending by different size of boats kept at the marina.(\$ Thousand)		
	<20ft	20-30ft	30+ft
Slip	0	1,753	285
Loan Payments	2,500	1,365	180
Motors	85	38	4
Trailers	43	16	1
Insurance	688	476	87
Repairs	934	783	173
Accessories	1,765	935	207



Conclusions

- RECONS was initially developed to estimate the economic impacts of ARRA spending by the USACE.
- RECONS platform has and will continue to be enhanced to serve additional purpose with special focus on estimating and evaluating the economic impacts of the direct investment and operational spending of the Corps navigation budget, as well as all the associated economic activities that are directly linked to Corps' Navigation infrastructure and program.
- This model provides a consistent means for estimating regional economic impacts associated with Corps' Navigation program across the nation, and allows to capture recreation use and other related benefits.
- These results provide a baseline for further analyses and improvements in future studies.



Questions?

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