

Profession Development Conference

Data Analytics and Visualization



DOUG GLENN

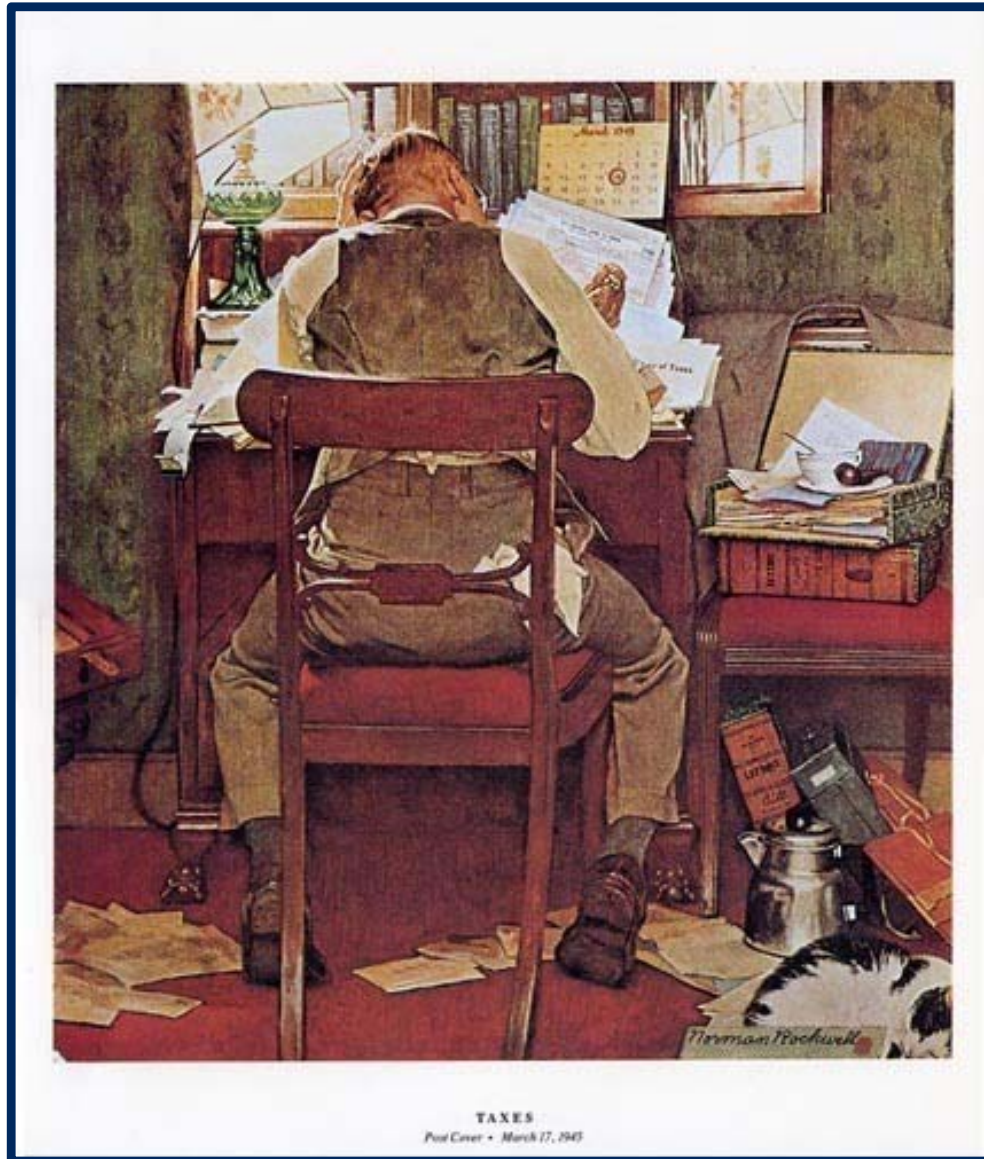
2016–2017 AGA National President

Guam

September 12th - 14th, 2016

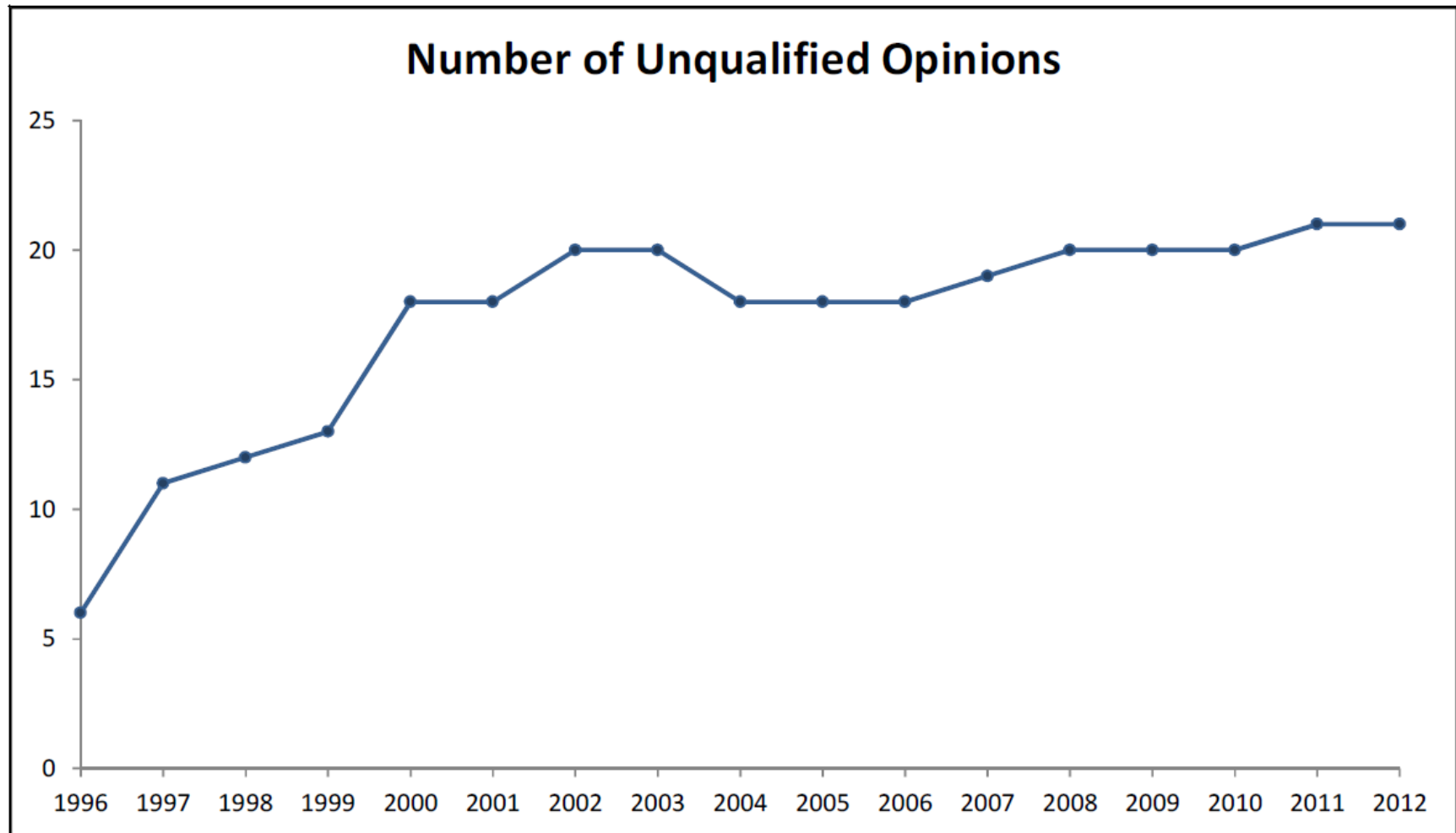


Old Accounting Role



Progress Since 1996

Figure 2. Agency Unqualified (Clean) Audits

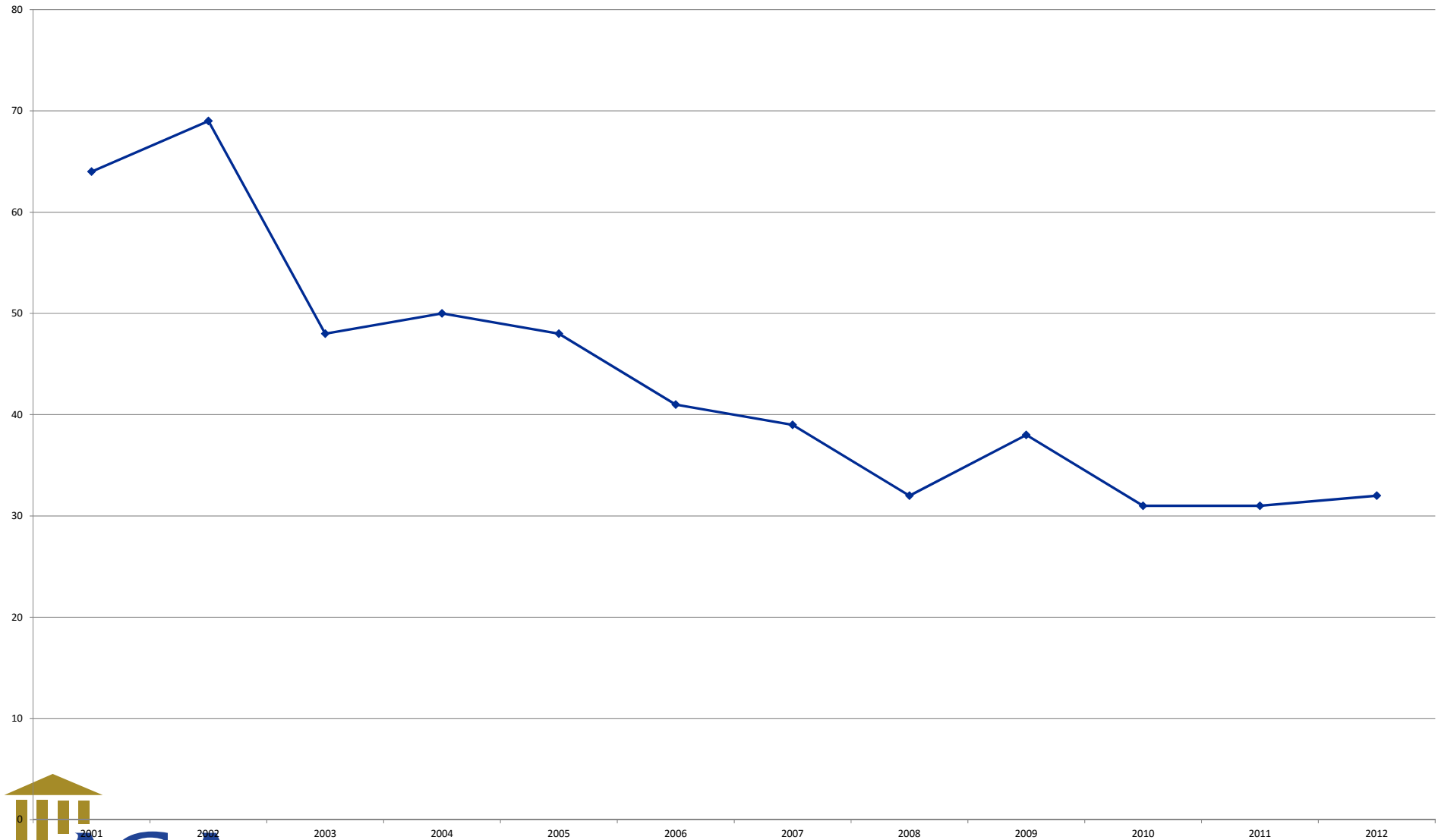


Source: Compiled by CRS from agency data.



Progress Since 2001

Agency Financial Audits: Number of Material Weaknesses



Current Reporting Model

Statement of Net Cost		
for the years ended September 30, 2012 and September 30, 2011		
(dollars in thousands)	FY 2012	FY 2011
Provide Natural and Cultural Resource Protection		
Gross Costs	\$ 8,525,594	\$ 8,537,412
Less: Earned Revenue	914,622	810,047
Net Cost	7,610,972	7,727,365
Manage Energy, Water & Natural Resources		
Gross Costs	5,613,721	4,996,796
Less: Earned Revenue	1,846,803	1,938,482
Net Cost	3,766,918	3,058,314
Advance Government to Government Relationships		
Gross Costs	4,806,140	7,915,007
Less: Earned Revenue	341,386	391,431
Net Cost	4,464,754	7,523,576
Provide a Scientific Foundation for Decision Making		
Gross Costs	1,582,292	1,586,986
Less: Earned Revenue	387,155	374,231
Net Cost	1,195,137	1,212,755
Building a 21st Century Department of the Interior		
Gross Costs	421,437	339,416
Less: Earned Revenue	2,892	3,499
Net Cost	418,545	335,917
Reimbursable Activity and Other		
Gross Costs	3,649,155	3,500,722
Less: Earned Revenue	1,872,634	1,808,753
Net Cost	1,776,521	1,691,969
TOTAL		
Gross Costs	24,598,339	26,876,339
Less: Earned Revenue	5,365,492	5,326,443
Net Cost of Operations (Notes 17 and 19)	\$ 19,232,847	\$ 21,549,896



Current Reporting Model

UDO MEASURES 2014 Q2 March

	TAB 4 UDO with PoP expired >90 days ago	TAB 5 count of UDOS open amt <3% of original amt and <\$20,000	Tab 6 Grant UDOS with PoP expired >180 days ago
BLM	8.14%	4.29%	4.72%
BOEM	10.26%	pass	0.12%
BOR	39.54%	3.27%	1.87%
BSEE	1.39%	2.26%	0.00%
DO	14.20%	6.68%	9.32%
FWS	3.80%	5.47%	1.24%
IA	16.01%	2.89%	13.40%
NPS	15.96%	4.65%	15.90%
OSMRE	0.47%	4.12%	0.35%
USGS	6.69%	4.55%	2.18%
ALL	12.89%	4.64%	4.41%
GREEN	0 - 5 %	0 - 5 %	0 - 5 %
YELLOW	> 5 % - 10 %	> 5 % - 10 %	> 5 % - 10 %
RED	> 10 %	> 10 %	> 10 %

REIMBURSABLE AGREEMENT MEASURES (UFCO) 2014 Q2 March

	TAB 7 UFCO % of \$ available to obligate in expired years	TAB 8 UFCO in unexpired appropriation but expired PoP (gl 4221 4222)	TAB 9 UFCO bal <5% of original UFCO (gl 4221 4222)
BLM	0.00%	2.71%	1.60%
BOEM	0.00%	0.48%	pass
BOR	0.01%	1.04%	0.06%
BSEE	0.00%	pass	pass
DO	-1.33%	16.43%	2.90%
FWS	0.33%	5.28%	1.04%
IA	0.08%	2.08%	4.40%
NPS	0.00%	12.40%	0.59%
OSMRE	0.00%	pass	0.00%
USGS	-0.25%	0.90%	0.29%
ALL	0.07%	7.59%	1.45%
GREEN	0 - 3 %	0 - 3 %	0 - 1 %
YELLOW	> 3 % - 6 %	> 3 % - 6 %	> 1% - 3%
RED	> 6 %	> 6 %	> 3 %



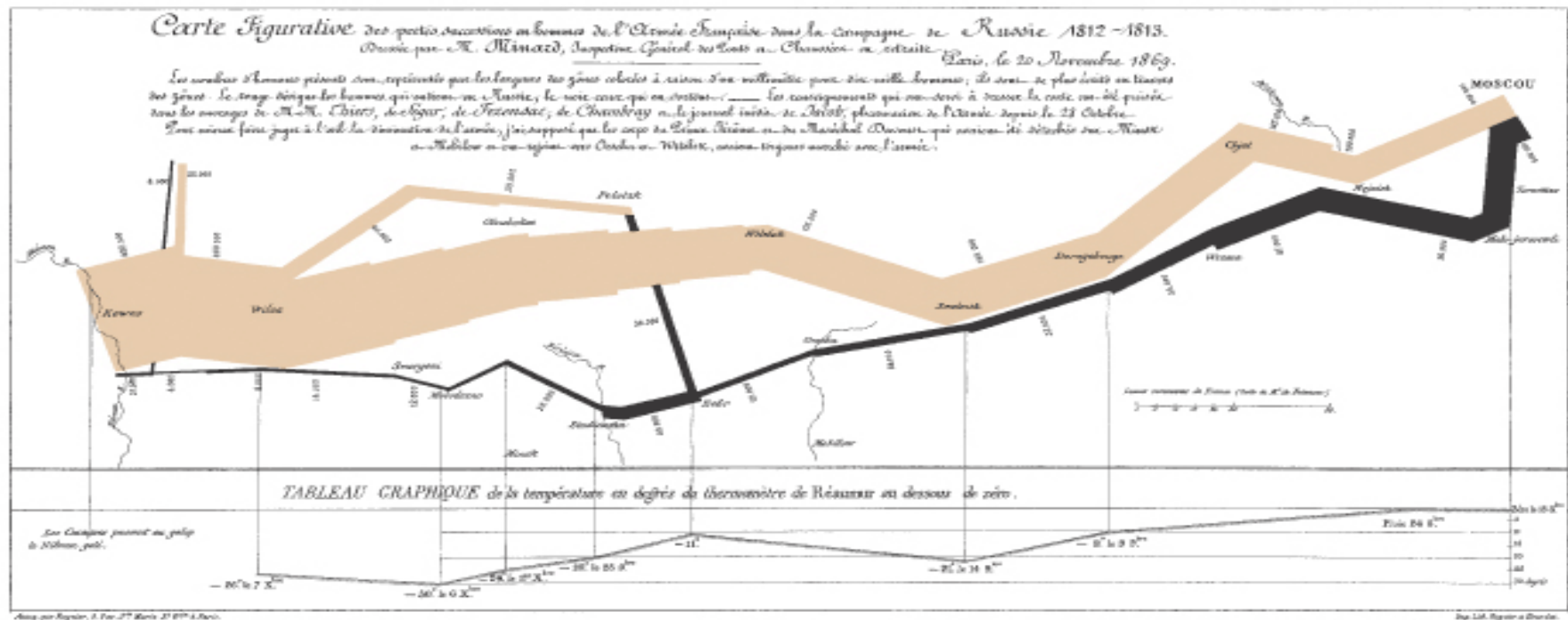
Current Reporting Model

The current reporting model and statements have driven improved internal controls, data integrity, and audit opinions over the last 20 years.

Who is reading our statements?

Is there a way to maintain or increase internal controls/data integrity while finding more USEFUL reporting formats?

A Picture is Worth 1,000 #s!



Napoleon's March to Moscow The War of 1812

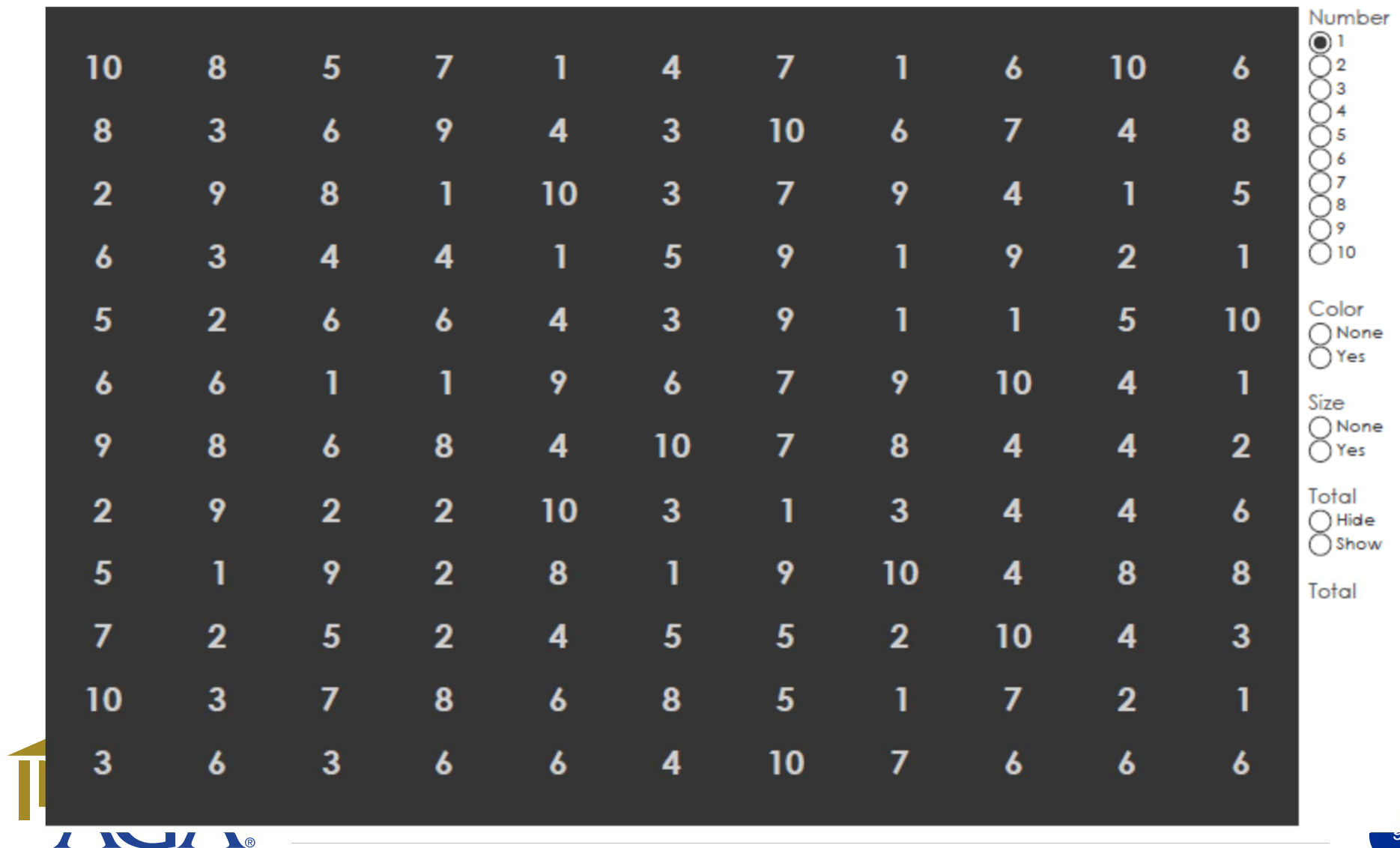
Charles Joseph Minard

The classic of Charles Joseph Minard (1781-1870), the French engineer, shows the terrible fate of Napoleon's army in Russia. Described by E. J. Macey as seeming to defy the pen of the historian by its brutal eloquence, this combination of data map and time-series, drawn in 1869, portrays the devastating losses suffered in Napoleon's Russian campaign of 1812. Beginning at the left on the Polish-Russian border near the Niemen River, the thick band shows the size of the army (422,000 men) as it invaded Russia in June 1812. The width of the band indicates the size of the army at each place on the map. In September, the army reached Moscow, which was by then isolated and deserted, with 100,000 men. The path of Napoleon's retreat from Moscow is depicted by the darker, lower band, which is linked to a temperature

scale and dates at the bottom of the chart. It was a bitterly cold winter, and many froze on the march out of Russia. As the graphic shows, the crossing of the Berezina River was a disaster, and the army finally struggled back into Poland with only 30,000 men remaining. Also shown are the movements of auxiliary troops, as they sought to protect the rear and the flank of the advancing army. Mizruchi's graphic tells a rich, coherent story with its multivariate data, far more enlightening than just a single number bouncing along over time. Six variables are plotted: the size of the army, its location on a two-dimensional surface, direction of the army's movement, and temperature on various dates during the retreat from Moscow. It may well be the best statistical graphic ever drawn.

Edward B. Dake, *The Flood Display of Quantitative Information* Graphics Press, Box 430, Cheshire, Connecticut 06610

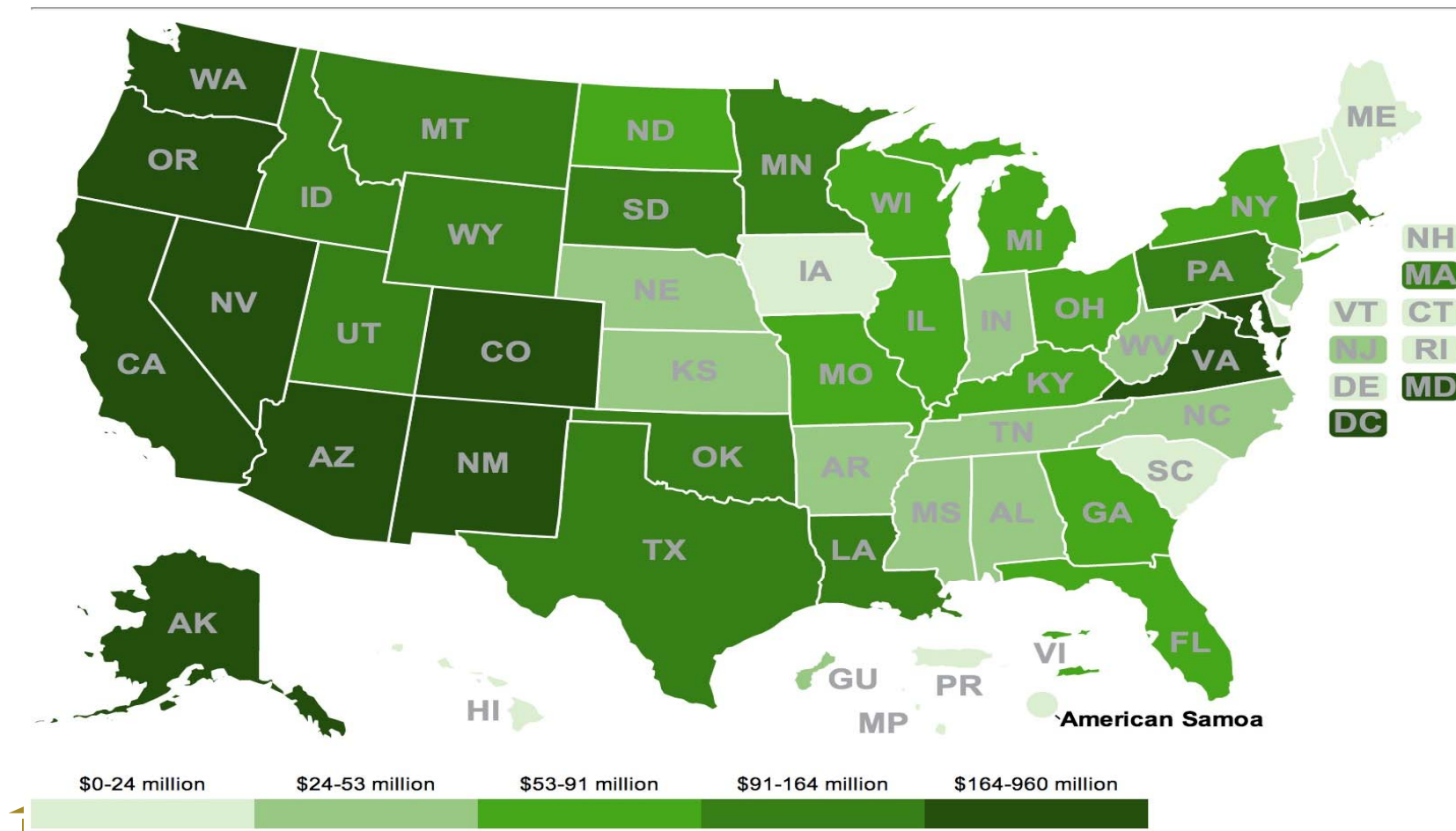
A Picture is Worth 1,000 #s!



A Picture is Worth 1,000 #s!

FY 2013 Domestic Expenditures by State

Department of the Interior



Notes:

*Bureau of Reclamation expenditures are excluded due to accounting system conversion in-progress

**All payroll expenditures are excluded from the map

We Can Do Better!



United States Department of the Interior FY 2014 Expenditures by OMB Account

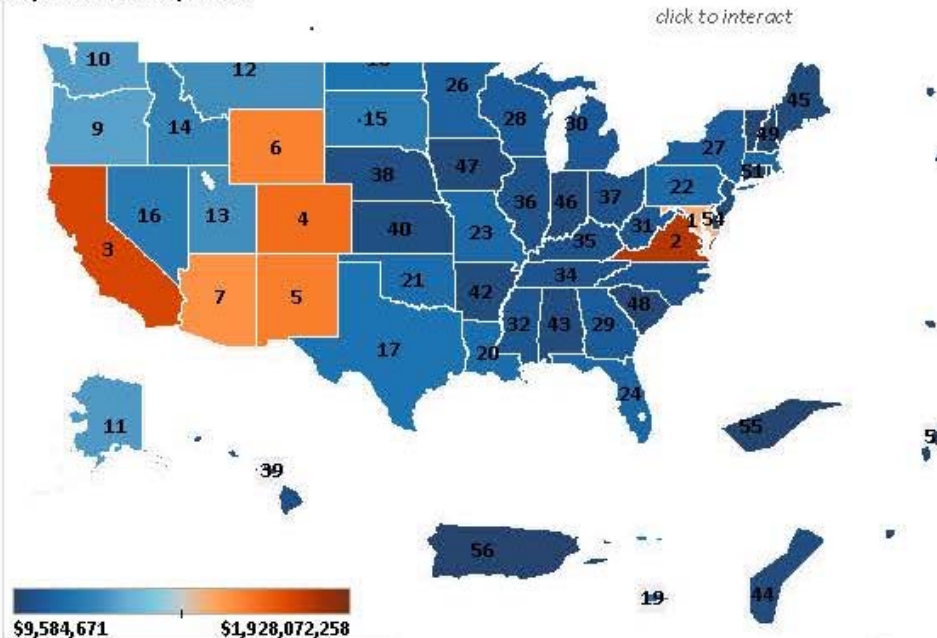
select detail

- ☒ OMB Account
- ☐ Budget Object Class
- ☐ Vendor

wildcard search

input text and press enter to apply filter
click on the x in the box to remove filter
A||

Expenditures by State



Notes:

- 1) Where funding is expended (i.e., paid) may not be the same place where program functions are performed
- 2) Expenditures reconcile to audited balances which are materially correct, however there may be minor anomalies and inaccuracies at the detail level
- 3) FY14 expenditures do NOT directly correlate with figures presented in the FY14 President's Budget since they include amounts from budgets enacted in other fiscal years

OMB Account Detail for All

Rank	Detail	Expenditures
1	Operation of Indian Programs	\$2,546,478,752
2	Operation of the National Park System	\$2,184,984,285
3	Mineral Leasing and Associated Payments	\$2,146,565,599
4	Resource Management	\$1,459,826,602
5	Working Capital Fund	\$1,370,040,382
6	Surveys, Investigations, and Research	\$1,367,072,973
7	Management of Lands and Resources	\$986,585,645
8	Interior Franchise Fund	\$875,839,499
9	Water and Related Resources	\$864,857,499
10	Wildland Fire Management	\$744,394,229
11	Federal Aid in Wildlife Restoration	\$459,483,078
12	Payments in Lieu of Taxes	\$437,012,085
13	Sport Fish Restoration	\$431,703,648
14	Working Capital Fund	\$371,694,256
15	Payments to the United States Territories, Fiscal As..	\$346,276,550
16	Salaries and Expenses	\$320,505,282
17	Lower Colorado River Basin Development Fund	\$273,249,229
18	Construction (and Major Maintenance)	\$271,494,141
19	Offshore Safety and Environmental Enforcement	\$194,293,768
20	Abandoned Mine Reclamation Fund	\$182,480,097
21	Construction	\$177,237,726
22	Payments to States in Lieu of Coal Fee Receipts	\$160,613,451
23	Detection Fee Permanent Appropriations	\$155,887,622

click to download map data

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United States Department of the Interior Financial Risk Assessment (4/30/2015) Department of Interior

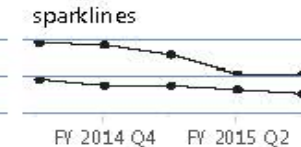
select bureau & date
DOI

4/30/2015

Accounts Payable



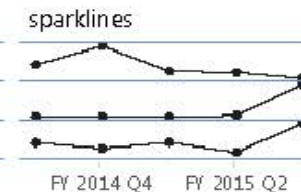
metric totals	
\$151,396	.22%
(\$5,364,235)	31.11%



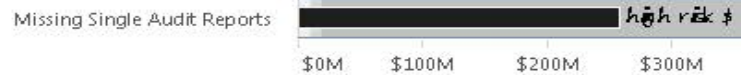
Accounts Receivable



metric totals	
\$2,179,998	6.27%
\$5,418,297	8.96%
(\$21,981,284)	64.93%



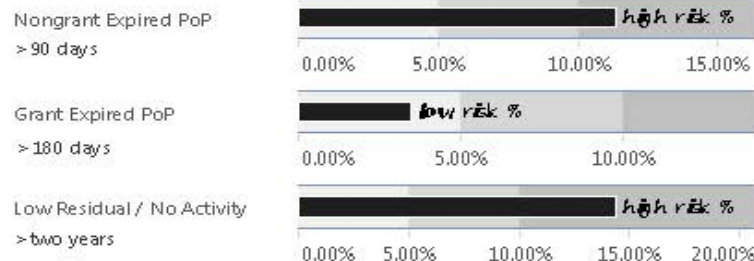
Grants



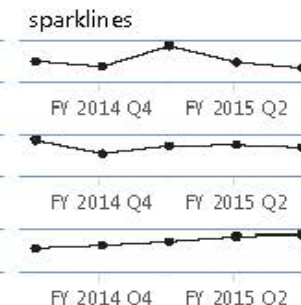
metric totals	
\$258,872,088	85



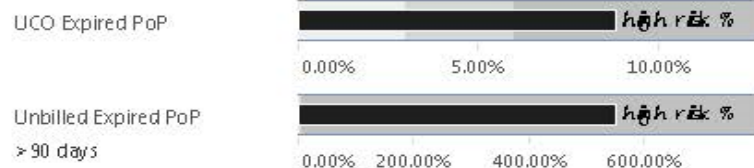
Undelivered Orders



metric totals	
\$592,682,024	11.37%
\$160,573,446	3.45%
828	14.42%



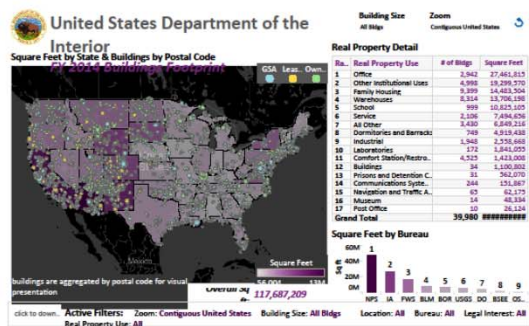
Unfilled Customer Orders



metric totals	
\$273,804,967	8.85%
(\$104,618,352)	551.92%



We Can Do Better!



We Can Do Better!

Indian Affairs Retirement Eligibility Series Analysis as of April 8th, 2015



Series average based on actual retirements from 10/1/2007 thru 04/08/2015

Static Retirement Forecast



Based on actual retirements from 10/1/2007 thru 04/08/2015

Filters:

Organization Descript..

All

Click to Highlight:

Eligible Now

Eligible this Year

Sub Bureau Descripti..

All

Next 5

Next 10

Current Performance ..

All

Next 15

Next 20

Future Performance L..

All

Next 25

Next 30

Series
0510

Next 31 or More

Top 15 Series Impacted

Ra..	Seri..	Employees
1	1710	1,151
2	1702	859
3	0303	373
4	0462	339
5	0301	297
6	1170	278
7	4749	251
8	5703	231
9	7404	227
10	0083	187
11	3566	182
12	1101	170
13	0007	165
14	1811	154
15	0340	134
16	Other	2,979

Top N and Retirement Status filters below only affect the table in this b..

Select Top N
15

Retirement Stat..
All



Costs AND Benefits

National Park Service

- ▶ *Managed 397 Park Units including the Grand Canyon and the Washington Monument, comprising nearly 85 million acres of land in 49 states, U.S. insular areas, and Territories*
- ▶ *Hosted over 279 million visits throughout the National Park system*
- ▶ *Maintained over 71,000 fragile and irreplaceable archeological sites, preserving links to our country's cultural and historical past*

NPS	(dollars in thousands)
Gross Cost	\$ 3,637,504
Earned Revenue	524,970
Net Cost	\$ 3,112,534

Indian Affairs

- ▶ *Managed 55 million surface acres and 57 million acres of subsurface minerals estates held in trust by the U.S. for individuals and tribes*
- ▶ *Provided education services to approximately 42,000 Indian students through 183 schools and dormitories*
- ▶ *Works in partnership with the more than 566 federally recognized Indian tribes to build stronger economies and safer Indian communities*

IA	(dollars in thousands)
Gross Cost	\$ 4,631,638
Earned Revenue	418,587
Net Cost	\$ 4,213,051

Costs AND Benefits



United States Department of Interior

Our Mission: Protecting America's Great Outdoors and Powering Our Future

Providing Value to the American People

This dashboard highlights some of the many benefits provided by each of the Department's Bureaus.

Hover over a logo and follow the link to explore a unique dataset from each Bureau.



Leadership

- Acknowledge your role as LEADER (see Leadership That Gets Results by Daniel Goleman).
- Work on your EQ.
- Give your team tangible opportunities for achievement. What is success?
- Celebrate successes and acknowledge setbacks.
- Be Decisive (Colin Powell Formula).
- Give positive AND constructive feedback (you want staff to succeed).
- When communicating, focus on the feeling/emotion as opposed to the words.
- Don't micro-manage; your staff's success is your success.

Parting Thoughts

The 2010 Exhibit 52 listed approximately \$49 B for Federal financial management including audit costs.

The 2010 U.S. Budget was \$4.5 T.

Therefore, **OUR** industry costs 1% of the U.S. Budget.
What would the fraud, waste, and abuse be without our 1%?



Parting Thoughts

We have all the financial activities of the private sector AND have to also record and report budgetary activities as well.

The program activities we're accounting for are MUCH more varied than the private sector which exists primarily (and simply) to maximize profits.

Be proud!



Closing

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202-513-0362