



# AGENDA

## *OSC Financial Conference*

December 15, 2015

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- 8:15 – 8:20 Call to Order – Elizabeth Colcord, Office of the State Controller, Accounting and Financial Reporting Manager
- 8:20 – 8:30 Opening Remarks and Fiscal Integrity Award Presentation – Dr. Linda Combs, State Controller
- Internal Audit Award of Excellence Presentation – Beth Wood, State Auditor
- 8:30 – 10:00 The New OMB Super-Circular: What is the impact on the **Grant** community? **HUGE** – Charles Hester, Instructor/Consultant
- 10:00 – 10:20 Break
- 10:20 – 12:00 The New OMB Super-Circular continued – Charles Hester, Instructor/Consultant
- 12:00 – 1:00 Lunch
- 1:00 – 1:05 Call to Order – Elizabeth Colcord, Office of the State Controller
- 1:05 – 1:55 Economic Update – Michael Walden, N.C. State University
- 1:55 – 2:45 State Auditor Updates – Beth Wood, State Auditor
- 2:45 – 3:05 Break
- 3:05 – 3:55 Cyber Workforce Development – Maria Thompson, State Chief Information and Risk Officer
- Cyber Awareness and Incident Response/Handling – Tim Brown, Department of Information Technology
- 3:55 – 4:45 Public Speaking and Communication – Dr. Elizabeth Nelson, N.C. State University
- Closing Remarks – Elizabeth Colcord, Office of the State Controller

**Upcoming Training Dates:**

May 17, 2016 – 2016 Governmental Accounting and Auditing Update

December 13, 2016 – 2016 OSC Financial Conference

**2015 OSC Financial Conference**  
Continuing Professional Education  
North Carolina Office of the State Controller\*

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<b>Date:</b>	December 15, 2015 8:15 a.m. to 4:45 p.m.
<b>Location:</b>	The McKimmon Conference and Training Center N.C. State University 1101 Gorman Street Raleigh, NC 27606
<b>Objective:</b>	To offer training on recent topics of interest to Chief Fiscal Officers and agency representatives including the new OMB Super-Circular, cyber security, personal development, and other current topics.
<b>Content:</b>	<ul style="list-style-type: none"><li>- The New OMB Super-Circular – impact on the grant community</li><li>- Economic Update</li><li>- State Auditor Updates – Departmental audits, Super-Circular</li><li>- Cyber Workforce Development</li><li>- Cyber Awareness and Incident Response/Handling</li><li>- Public Speaking and Communication</li></ul>
<b>Instructors:</b>	Charles Hester, Instructor/Consultant Michael Walden, Professor and Extension Economist, N.C. State University Beth Wood, State Auditor Maria Thompson, State Chief Information and Risk Officer, and Tim Brown, Threat Management Lead, Department of Information Technology Elizabeth Nelson, Professor, N.C. State University
<b>CPE Credit Offered:</b>	Eight hours
<b>Materials:</b>	Will be available in advance on the OSC web page
<b>Teaching Method:</b>	Lecture
<b>Mini-breakfast:</b>	Available beginning at 7:30 a.m. (biscuits, muffins, and fruit)
<b>Lunch:</b>	12:00 p.m. – 1:00 p.m. (barbeque, fried chicken, sides, and dessert)
<b>Prerequisites:</b>	Employed by a State agency or institution that is part of the State financial reporting entity (i.e., an entity included in the State's Comprehensive Annual Financial Report)
<b>Advance Preparation:</b>	None
<b>Level:</b>	Basic

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\* Click the following link for additional information about the [NC Office of the State Controller](#), the sponsor and developer of this program.

## ***Biographical Sketch***

### ***Charles W. Hester, CPA/CFF/FCPA/CFE/CFS/CFIP/CGFM***

Charles (Chuck) Hester, Sr. served as the Western District Inspector General and Audit Manager for the Federal Emergency Management Agency (FEMA) until his retirement in 1995. Chuck is currently an instructor for various organizations, including Graduate School's Government Audit Training Institute in Washington, DC, and the Pacific Islands Training Institute in Honolulu, HI. Chuck has also taught for the Association of Government Accountants' Education and Research Foundation, the California Association of State Auditors, and various other accounting and auditing professional organizations. In addition, Chuck has served as a Special Consultant for the Asian Development Bank, the Supreme Court of the Republic of Palau, and for various CPA firms. In addition, Chuck has served as the Team Leader or Team Member for External Peer (Quality Control) Reviews for numerous national, state, and local audit agencies.

Chuck is a member of various professional auditing and accounting organizations and has written several articles that have been published in professional journals. Chuck is Certified in Financial Forensics by the AICPA. In California, Chuck currently serves as member of the Qualifications Committee for the California Board of Accountancy. Chuck has also served on the California State Bar's Commission on Judicial Nominees Evaluation. In the past Chuck has served on the Disciplinary Board of the Oregon State Bar and on the Oregon Boards of Geologists, Engineers, and Land Surveyors.

Chuck is the recipient of the Faculty Excellence Award from the Graduate School. Chuck has also received numerous other awards including the Jack Birkholz Leadership Award presented by the Western Intergovernmental Audit Forum and the Education and Training Award presented by the National Association of Government Accountants.

November 5, 2015  
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## MICHAEL L. WALDEN

Dr. Michael L. Walden is a William Neal Reynolds Distinguished Professor and Extension Economist at North Carolina State University and a member of the Graduate Economics faculty with The Poole College of Management. His Ph.D. degree is from Cornell University and he has been at N.C. State since 1978. He has also been a Visiting Professor at Duke University. He also serves as a member of the North Carolina Chamber of Commerce Foundation's Board of Economic Advisors.

Dr. Walden has teaching, research, and extension responsibilities at NCSU in the areas of consumer economics, economic outlook, and public policy. He has published eight books and over 250 articles and reports, including the book *North Carolina in the Connected Age*, published by the UNC Press. He has served on several local and state level commissions. With his wife, he is the co-author of three "economic thrillers", *Macro Mayhem*, *Micro Mischief*, and *Fiscal Fiasco*, designed to teach economics in an entertaining way.

Dr. Walden can be frequently seen, heard, and read in the media. He has daily radio programs aired on stations around North Carolina for which he has won two national awards. He is often interviewed on local TV and radio news broadcasts, has appeared on *NBC*, *CBS*, *The Fox Report*, and the *Newshour With Jim Lehrer*, and is frequently quoted in such newspapers as *USA Today*, *The News and Observer*, *The Charlotte Observer*, *The Boston Globe*, *The Wall Street Journal*, and *The Washington Post*. His biweekly column, *You Decide*, is carried by over forty newspapers in the state. He has made over 2500 personal presentations.

Dr. Walden directs the semiannual economic forecast, *The North Carolina Economic Outlook*. He has won numerous academic and public awards, including two Champion-Tuck Awards for Excellence in Broadcasting, the UNC Board of Governor's Award for Excellence in Public Service in 2010, the Order of the Long Leaf Pine in 2013, and the Holladay Medal for Excellence from North Carolina State University in 2014.

## North Carolina State Auditor Beth A. Wood, CPA

Beth Wood is in her second term as North Carolina's elected State Auditor. She is a Certified Public Accountant and long-time public servant with nearly 25 years of auditing experience.

Beth served in the State Auditor's Office for more than a decade before being elected. Before joining the State Auditor's Office, she served in the State Treasurer's Office and in the private sector. She is the first woman elected to the position of State Auditor in North Carolina.

During her tenure, the office has performed audits that would help state leaders cope with the worst economic conditions since the Great Depression. Those audits have focused on contracting practices that favored vendors at the expense of taxpayers and changes in agency procedures that have saved the state hundreds of millions of dollars.

In her second term, Beth has produced audits to help strengthen and improve state government. Audit teams across the state are watching every area of state government for potential savings that help make the best use of taxpayer dollars.

Additionally, the office is following up on prior audits, evaluating the use of best practices by state agencies and working to attract and retain highly skilled auditors.

## **Elizabeth A. Nelson**

Dr. Elizabeth A. Nelson is a Teaching Assistant Professor and Director of Public Speaking at North Carolina State University in the Department of Communication. She earned her BAs in English and Communication Studies, as well as her MA, and PhD in Communication Studies at the University of North Carolina at Chapel Hill. Elizabeth's areas of interest include the intersection of public address and civic action, connections between identity and social movements, and issues of diversity and inclusion. In addition to cultivating, growing, and teaching in the public speaking program, Elizabeth also teaches classes including advanced presentational speaking, interpersonal communication, gender communication, introductory communication theory courses, and an introductory and advanced class in the Women's and Gender Studies program.



## **Maria S. Thompson**

Maria S. Thompson is the Chief Information Risk Officer and the Chief Information Security Officer for the State of North Carolina.

Maria brings to the State over 20 years of experience in Information Technology and cybersecurity. She served 20 years in the United States Marine Corps and retired as the Cybersecurity Chief/Information Assurance Chief for the Marine Corps. Since then, she has served in numerous security roles such as Certification and Accreditation (C&A) lead for the Multi National Forces – Iraq. There, her primary mission was to conduct Risk Analysis and apply Risk Management for systems and applications entering the Iraq Theater of Operations (ITO) and deployed in support of U.S. missions in Iraq. In addition to C&A, she provided security advisory services to Military Commanders, translating risks to solutions, and driving compliance.

Since then Maria has served in other notable roles, such as a Senior Security Engineer supporting the Joint Improvised Explosive Device Defeat Organization (JIJEDDO) Software Integration Lab and Security Lead and Program Manager (contractor), to the Environmental Protection Agency's (EPA), Network Security Operations Center. There she oversaw and provided security infrastructure support, threat and vulnerability management and compliance to the EPA's many disparate divisions across the continental United States. Maria was instrumental in helping the Agency through its security infrastructure upgrades and all other cybersecurity strategic initiatives.

Maria earned her bachelor's degree from the University of Maryland, University College (UMUC), in Information Systems Management. She also holds a Masters in Information Technology from UMUC. Maria's personal honors include receiving the 2007 National Security Agency's prestigious Rowlett Award for individual achievement in Information Assurance. Additionally, she received the 2008 Office of Secretary of Defense Certificate of Excellence for the implementation of an IA strategy for the Information Assurance Workforce. Maria's currently holds the ISC2 CISSP, ISACA CRISC, National Security Agency IAM/IEM and ITIL v3 certifications.

## **Tim Brown, CISSP, Sr. IT Security Specialist**

As the Cyber Incident Response lead for the DIT Enterprise Security and Risk Management Office, Tim has over 15 years' experience in CyberSecurity. Currently assigned to the local Federal Cyber Task Force working cyber incidents involving state and local government, schools and universities. Previous experience includes supporting IT operations and security in various law enforcement environments for the SBI AFIS deployment as well as the Raleigh Police Department and City-County Bureau of Identification.

Current goals include continued efforts to secure State of North Carolina IT assets in accordance with statewide security standards and working to bring awareness to state employees and agencies on the needs to better secure systems and networks against the cyber threats and vulnerabilities we face every day.

### Certifications:

CISSP

### Edu:

BA NC Wesleyan

AAS Wake Tech



# **OMB's Super-Circular**

*Understanding and Complying with the  
New OMB Administrative Requirements,  
Cost Principles, and Audits Requirements  
for Grants and Other Agreements*

***Charles W. Hester***

CPA, FCPA, CFF, CFE, CGFM, ICFP

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## **This course will attempt to cover:**

- The Federal shift from compliance to performance
- New focus on risk
- New time and effort certification
- New rules on procurement
- Written controls on cash management and allowability
- New rules on travel, meals, and conferences
- New controls on computers
- Conflicts/fraud/gratuity rules
- New rules on audits of Non-federal recipients
- Changes to close-out/management decisions

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## We will also try to cover:

- Developing and negotiating cost allocation plans & indirect cost rates
- Effective Sub-recipient monitoring
- Successfully applications for grants and agreements
- OMB, GAO & COFAR plans for the future

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The screenshot shows the homepage of the Office of Management and Budget. At the top, there is a navigation bar with links for BRIEFING ROOM, ISSUES, THE ADMINISTRATION, PARTICIPATE, and 1600 PENN. A search bar is located on the right. Below the navigation bar, the breadcrumb trail reads "Home • The Administration • Office of Management and Budget". The main header features the OMB seal and the text "Office of Management and Budget". A secondary navigation bar includes links for About, OMBlog, The Budget, Management, Regulation & Information Policy, Legislative Information, Join, and Contact. The main content area has a blue background with a large quote on the left and a photograph of a bridge on the right. The quote reads: "We have risen from recession freer to write our own future than any other Nation on Earth. It's now up to us to choose what kind of country we want to be over the next 15 years, and for decades to come. This Budget shows what we can do if we invest in America's future and commit ourselves to an economy that rewards hard work, generates rising incomes, and allows everyone to share in the prosperity of a growing America." The photograph shows a bridge with a sign that says "FISCAL YEAR 2014 BUDGET OF THE U.S. GOVERNMENT".

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We have risen from recession freer to write our own future than any other Nation on Earth. It's now up to us to choose what kind of country we want to be over the next 15 years, and for decades to come. This Budget shows what we can do if we invest in America's future and commit ourselves to an economy that rewards hard work, generates rising incomes, and allows everyone to share in the prosperity of a growing America.

FISCAL YEAR 2014  
**BUDGET**  
OF THE U.S. GOVERNMENT

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## Super-Circular – a chronology

- February 28, 2012: OMB advance notice of proposed guidance
- February 1, 2013: OMB notice of proposed guidance
- December 26, 2013: OMB issuance of uniform guidance
- December 26, 2014: Super-Circular implementation
  - Administrative rules and cost principles for grant years starting after December 25, 2014
  - Single Audits for fiscal years starting after December 25, 2014

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## Super-Circular

- Title 2 CFR – Grants and Agreements
  - Subtitle A – Office of Management and Budget Guidance for Grants and Agreements
    - Chapter 1 – Office of Management and Budget Government-wide Guidance for Grants and Agreements (§1 – §199)
    - Chapter II – Office of Management and Budget Circulars and Guidance (§200 – §299)
  - Subtitle B – Federal Agency Regulations for Grants and Agreements (§300 – §5999)
    - Chapters III (DHHS) through LIX (Gulf Coast Ecosystem Restoration Council)

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## 2 CFR Part 1 – About Title 2 and Subtitle A

- Subpart A – Introduction to Title 2 of the CFR (§1.100 – §1.110)
- Subpart B – Introduction to Subtitle A §1.200 – §1.1.230)
- Subpart C – Responsibilities of OMB and Federal Agencies (§1.300 – §1.305)

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## 2 CFR Chapter 1

- Parts 2 – 24 = **Reserved**
- Part 25 = Universal Identifier and System of Award Management
- Parts 26 – 169 = **Reserved**
- Part 170 – Reporting Sub-award and Executive Compensation Information
- Parts 171 – 174 = **Reserved**
- Part 175 = Award Terms for Trafficking in Persons
- Part 176 = Award Terms for Assistance Agreements That Include Funds Under the American Recovery and Reinvestment Act of 2009 (P.L. 111-5)

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## 2 CFR Chapter 1 (*Continued*)

- Parts 177 – 179 = **Reserved**
- Part 180 = OMB Guidelines to Agencies on Government-wide Debarment and Suspension (Non-procurement)
- Part 181 = **Reserved**
- Part 182 = Government-wide Requirements for Drug-Free Workplace (Financial Assistance)
- Parts 183 – 199 = **Reserved**

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## The Super-Circular 2 C.F.R. Part 200

- **Subpart A** – Acronyms and Definitions (§200.0 – §200.99)
- **Subpart B** – General Provisions (§200.100 – §200.113)
- **Subpart C** – Pre-Federal Award Requirements and Contents of Federal Awards (§200.200 – §200.212)
- **Subpart D** – Post Federal Awards Requirements (§200.300 – §200.345)
- **Subpart E** – Cost Principles (§200.400 – §200.475)
- **Subpart F** – Audit Requirements (§200.500 – §200.521)
- **Appendix I** through XI

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## Appendices in the Super-Circular

- I – Full text of notice of funding opportunity
- II - Contract Provisions for Non-federal Entity Contracts Under Federal Awards
- III - Indirect (F&A) Costs Identification and Assignment, and Rate Determination for Institutions of Higher Education (IHEs)
- IV - Indirect (F&A) Costs Identification and Assignment, and Rate Determination for Non-profit Organizations

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## More Appendices

- V - State/Local Government and Indian Tribe-Wide Central Service Cost Allocation Plans
- VI - Public Assistance Cost Allocation Plans
- VII - States and Local Government and Indian Tribe Indirect Cost Proposals

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## Still more Appendices

- VII – Non-profit Organizations Exempted  
From Subpart E, Cost Principles of Part 200
- IX - Hospital Cost Principles
- X - Data Collection Form (Form SF–SAC)
- XI – Compliance Supplement
- XII – Award Terms and Conditions for  
Recipient Integrity and Performance Matters  
**(NEW)**

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## Final guidance covers all aspects of Federal Government grants

- Administrative rules
- Cost principles
- Single Audit requirements
- Issued December 26, 2013 (**Merry Christmas  
or Baa Humbug!**)
- Becomes effective December 26, 2014
- Federal Government Departments/Agencies  
must issue any needed implementing  
regulations to meet that deadline

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## Supersedes many OMB Circulars

- Administrative Rules
  - A-102
  - A-110 (2 CFR 215)
- Cost Principles
  - A-21 (2 CFR 220)
  - A-87 (2 CFR 225)
  - A-122 (2CFR 230)
- Other
  - A-50 (Audit follow up on Single Audits)
  - A-89 (Catalog of Federal Government Domestic Assistance)
  - A-133 (Single Audit Requirements)

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## Intended to streamline grant rules

- Eliminate duplicative and conflicting guidance
- Focus on performance over compliance
- Encourage efficient use of IT
- More consistent treatment of costs
- Limit costs to best use Federal Government resources
- Strengthen oversight
- Target audits to risk of fraud, waste, and abuse

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# **OMB's Super-Circular**

*Understanding and Complying with the  
New Administrative Requirements  
for Grants and Other Agreements*

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## **Subpart A: Acronyms and Definitions**

- Acronyms are all in §200.0
  - Lots of acronyms (45)
- Definitions in §200.1 to §200.99
  - Lots of definitions

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## Subpart B: General Provisions (§200.100 – §200.113)

- Rules flow down to sub-recipients
- Federal agencies cannot impose additional or conflicting provisions
- Table shows which requirements relate to which grant types
- Federal agencies must establish conflict-of-interest policies on awards
- Recipients must disclose all illegal acts to Federal Government in writing (Appendix XII)

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## Subpart C: Pre-award Requirements (§200.200 – §200.212)

- Federal Government **and pass-through entities** must use Federal Grant and Cooperative Agreement Act (FGCA) to determine appropriate award instrument
- Agencies can make fixed-amount awards, but shouldn't permit profit
- Pass-through entities that have prior approval, can make fixed-amount sub-awards

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## Public Notice

- Federal agencies must include programs in CFDA
- Must provide specific information to GSA
- Provide public notice of all competitive grant opportunities

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## Federal agency review of competitive applications

- Must have a merit review process that is described in public notice
- Agency must consider risk posed by grant applicants before making award
- Agency or pass-through agency may impose additional restrictions for “high-risk” grantees
- Agency must publicize all grant awards

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## Subpart D – Post-award Requirements

- Standards for Financial and Program Management (§200.300 – §200.309)
- Property Standards (§200.310 – §200.316)
- Procurement Standards (§200.317 – §200.326)
- Performance and Financial Monitoring and Reporting (§200.327 – §200.329)
- Sub-recipient Monitoring and Management (§200.330 – §200.332)

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## Subpart D – Post-award Requirements

- Record Retention and Access (§200.333 – §200.337)
- Remedies for Non-Compliance (§200.338 – §200.342)
- Closeout (§200.343)
- Post-Closeout Adjustments and Continuing Responsibilities (§200.344)
- Collection of Amounts Due (§200.345)

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## Subpart D – Post-award Requirements

- Cover financial management and program management
- Must administer grants in accordance with National Priority Requirements (public welfare, anti-discrimination, environment, etc.)
- Agency must require financial and performance reporting in accordance with OMB standards

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## Financial Management Rules

- States follow their own procedures
- Financial management systems of **all** entities:
  - Must allow for required reports
  - Must permit tracing of funds to be sure they were spent in accordance with the rules

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## Financial Management Rules (*continued*)

- Show **all** Federal funds received and expended
- Accurate, current, and complete accounting information
- Records show fund source and application
- Adequate internal controls
- Comparison of budget vs. expenditures
- Written procedures dealing with advance payments and allowability of costs

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## Internal Controls

- Reasonable assurance that grant programs are in compliance
  - Follow **GAO** internal control standards
  - Follow **COSO** internal control framework
- Take prompt action when non-compliance identified
- Reasonable measures to protect Personally Identifiable Information (**PII**)

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## Payments (advance funding)

- States are covered by CMIA
- Other entities must minimize the time for advance funding
- Advancing funds is the norm
- Advance payments should be consolidated
- Grantees can request funds as frequently as they want with EFT
- Otherwise can request funds at least monthly

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## Other Rules on Payments

- If entity does not qualify for advance funding, reimbursement is first choice
- If entity doesn't have financial resources for reimbursement, Federal Government can provide advance of working capital
- Agencies cannot withhold any funds unless:
  - Grantee has violated requirements
  - Grantee is delinquent on Federal debt

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## Depository Accounts for Advanced Funds

- Federal Government cannot require separate bank accounts
- Funds must be kept in insured accounts
- Use interest bearing accounts, unless:
  - Grantee receives <\$120,000 per year
  - Account not expected to earn >\$500 per year
  - Minimum balance requirements not feasible
- Grantee can keep first \$500 of interest
- Additional interest should be remitted to HHS

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## Cost Sharing/Matching

- Not required
- Voluntary committed matching is not expected, and can't be used as a factor in the award decision
- Criteria for considering voluntary matching must be described in notice of funding opportunity

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## Cost sharing must be accepted when it is:

- Verifiable from the entity's records
- Not charged to, or used as cost sharing on, another award
- Necessary, reasonable, and allowable
- Included in the approved award budget

Unrecovered indirect costs can be claimed as cost sharing only with the agency's approval

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## Valuing Third Party Contributions

- For real property donated as direct cost, lesser of:
  - Book value at time of donation
  - Current FMV
- Use FMV for equipment
- Volunteer time should be valued at usual rates
- Employee time donated by third parties valued at usual rates, including fringe benefits

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## Program Income

- Grantees encouraged to earn program income
- Grantee governmental revenues are not considered program income
- Agency may approve offsetting income with costs
- Revenue from selling property is not program income

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## Use of Program Income

- Deductive method
- Additive method
- Cost sharing
- Default methods
  - For most grants, use deductive method
  - For IHE's and non-profit research institutions, use additive method
- No obligation after the grant period

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## Budget revisions needing approval – Non-construction Grants

- Change in scope or objectives
- Change or significant reduction of time of a key person (PI or PD)
- Transfer out of participant support costs
- Change in cost-sharing
- Switch between construction and non-construction
- For grants >\$150,000 then transfers >10% of total award

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## Budget revisions needing approval – Construction Grants

- Change in scope or objectives
- Need for additional funds
- Need for costs requiring prior approval

**No other restrictions on  
budget revisions can be  
placed on construction or  
non-construction grants**

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## Property Standards

- Same insurance for property acquired under Federal award
- Real property
- Title vests in grantee
  - Use for original purpose as long as needed
  - When no longer needed, Federal Government decide:
    - Keep and reimburse Federal Government
    - Sell and reimburse Federal Government
    - Give to Federal Government and get reimbursed

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## Federal Government-Owned Property

- Federal Government retain title
- Entities submit annual report of Federal-owned property in the their custody
- When no longer needed, report to the Federal Government
- If agency doesn't need it any more, they declares it excess
  - May be able to donate research equipment to educational/research institution
- “Exempt” property: acquired under award and Federal Government decided to give it to entity

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## Supplies

- Title vests with grantee
- If FMV at end of project <\$5,000 then no further obligation to the Federal Government

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## Equipment

- Title vests in grantee, but cannot encumber the property
- Use until project ends or need for it ends
- States manage equipment under their rules
- Others: when equipment is no longer needed, can be used on other Federal Government programs
- For disposition, if FMV is over \$5,000 per unit, then treat like real property
- If FMV <\$5,000 per unit no accountability

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## Intangible Property

- Title vests with grantee
- Cannot encumber it without approval from Federal Government
- For disposition, treat like equipment
- Federal Government have a royalty-free, non-exclusive right to use, and can authorize others
- For research data, FOIA may apply

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## Procurement

- States follow their own rules
- All entities must incorporate required contract provisions
- Non-state entities have extra requirements
  - Use their own procedures
  - Have conflict-of-interest rules, including organizational conflicts-of-interest
  - Deal with only responsive/responsible contractors
  - Ensure full and open competition
    - No geographical preferences

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## Additional Rules for Non-state Agencies

- Simple rules for micro-purchases
  - Usually <\$3,000
  - \$2,000 if Davis-Bacon applies
- Small purchase procedures
  - For procurements <\$150,000
  - But organization must follow its own rules
- Large procurements require formal quotes
- Must have a cost or price analysis of any procurement >\$150,000

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## Monitoring

- Pass-through entity must monitor sub-recipients
- Frequency of reporting
  - At least annually
  - At most quarterly
- Use OMB approved reporting data
- Promptly report any known problems or favorable events
- Agency can make site visits as warranted

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## Differentiate between Vendors/ Contractors and Sub-recipients

- Use the proper award instrument
- Impacts the amount of monitoring that is required
- Substance of agreement is more important than the form of the agreement

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## Factors indicative of a Sub-recipient

- Determines eligibility (e.g., of beneficiaries)
- Performance measured against grant objectives
- Responsible for programmatic decision-making
- Required adherence to Federal grant rules
- Uses the funds to support its program as distinct from providing goods or services for a program of the “pass-through” entity

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## Factors indicative of a Vendor/Contractor

- Provides goods and services in normal course of business
- Provides similar goods/services to other customers
- Operates in a competitive environment
- Goods/services are ancillary to the Federal Government program
- Not subject to Federal assistance program rules

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## Requirements for Pass-through Entities

- Provide necessary information to sub-grantees
- Impose Federal Government regulations
- Evaluate each applicant for sub-grant for risk of non-compliance in order to determine appropriate monitoring

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## Indirect Cost Rate Requirements for Pass-through Entities

- Accept Federal Government negotiated rate, when applicable
- Negotiate an indirect cost rate using Federal cost principles
- Allow a minimal rate of 10% of modified total direct costs for entities that are unable to develop an indirect cost rate
  - Entity cannot have had a negotiated rate in the past
  - Not for some state and local governments

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## Records Retention

- Generally 3 years from filing of financial reports
- For real property and equipment, 3 years after disposition
- Many individual issues — all relating to 3 years
- Keep records if there is litigation, audit issue, etc.

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## Access to Records

- Agency, its Inspector General and GAO have access to all award-related records
- That requirement should be passed on to sub-recipients
- Includes timely and reasonable access to employees
- Access continues as long as records are retained

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## Remedies for Non-compliance

- Withhold cash payments
- Disallow costs claimed
- Wholly or partly terminate
- Initiate suspension and debarment
- Withhold future awards
- Other remedies that are legally available

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## Termination can be effected by:

- Agency, if grantee fails to perform
- Agency, with consent of grantee
- Grantee can terminate
  - If grantee wants to terminate in part, Federal Government may decide to terminate entire project
- Termination must be in writing
- Obligations after termination are unallowable

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## Close-out does not affect

- Federal Government right to disallow costs
- Obligation to make appropriate refunds
- Continuing responsibilities
  - Audit
  - Property management
  - Records retention

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# QUESTIONS!

Remember  
E-mail me if you think of  
anything later!  
CharlesHester@msn.com

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## **OMB's Super-Circular**

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New Cost Principles  
for Grants and Other Agreements*

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## Subpart E: Cost Principles

- General Provisions (§200.400 – §200.401)
- Basic Considerations (§200.402 – §200.411)
- Direct and Indirect (F&A) Costs (§200.412– §200.415)

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## Subpart E: Cost Principles

- Special Considerations for State, Local Governments, and Indian Tribes (§200.416 – §200.417)
- Special Considerations for Institutions of Higher Education (§ 200.418 – §200.419)
- General Provisions for Selected Items of Cost (§ 200.420 – §200.475)

60

## Subpart E: Cost Principles

- Grantee is responsible for operating effectively and efficiently
- Grantee must follow the rules
- Accounting practices must be in accordance with the cost principles
- For IHEs, recognize the dual role of students as trainees and research workers
- Federal Government can provide prior approval for some costs ahead of time

61

## To be allowable, costs must:

- Be necessary and reasonable
- Be allocable
- Conform to the cost principles and award
- Be treated consistently
- No double dipping
- Be adequately documented
- Reduced by any applicable credits
- Conform to GAAP

62

## Reasonableness

- Prudent person rule
- Ordinary and necessary
- Sound business practices
- Arms-length bargaining
- Use of established practices

63

## Allocability

- Charges relate to benefits
- All activities are charged a fair share
- Cannot reallocate to avoid restrictions
- But can reallocate if costs are OK under either program

64



## Conform to any limitations

- Program laws and regulations
- Specific grant provisions
- Cost principles

65

## Consistent treatment

- Like costs in like circumstances are treated consistently
  - Direct vs. indirect
  - Federal Government vs. Non-federal Government
  - Budgeted costs vs. un-budgeted costs

66

## Not claimed twice

- All costs can be claimed only once
- They cannot be charged to two grants
- Cannot be charged to one grant and used as cost sharing on another

67

## Adequate documentation

- The regulations generally do not set forth specific documentation standards
- However, they provide more guidance for salary and wages
- Otherwise, the reasonable person (auditor?) must decide
- Contemporaneous documentation is always more credible than documentation prepared after-the-fact

68

## Total costs

- Include both direct and indirect
- No one rule for classification
- Must be consistent

**Note how frequently consistency is cited**

69

## Direct costs

- Identified with final cost objective. Examples include:
  - Salaries of persons working on project
  - Travel associated with the project
  - Approved capital expenditures
- un-allowable costs must be allocated indirect costs if they:
  - Include salaries
  - Occupy space
  - Benefit from the indirect costs

70

## Indirect costs

- Indirect costs are those having a common or joint purpose
- Not readily assignable
- Minor items can be classified as indirect, if treated consistently
- Allocation plan can be simple or complex
- Indirect costs may be limited by law
- The rules contain some special provisions for IHEs and State/Local governments

71

## Facilities and Administrative costs

- Major IHEs and non-profits must classify their indirect costs as either facilities costs or administrative costs
- Facilities costs:
  - Depreciation on buildings and equipment
  - Operations and maintenance expenses
- Administrative costs
  - General expenses
  - Other indirect costs not included as facilities expenses

72

## Selected items of cost

- Lists 55 items (alphabetical order)
- Some items relate to just one type of grantee
- If a cost is not in the list, that doesn't mean that it's allowable or that it's un-allowable
- In a conflict between the cost principles and the Federal award, the award takes precedence
- We will cover items that have changed or that sometimes create problems

73

## Some costs are almost always un-allowable

- Alcoholic beverages
- Uncollectible debts
- Contingency reserves
- Contributions
- Entertainment and employee morale
- Fund raising
- Goods or services for personal use
- Under-recovery on other Federal grants
- Use allowances

74

## Salaries and Wages (Compensation for personal services)

- Salary must be reasonable
- There may be limits on total salary rate
- Reasonable incentive compensation is permissible
- Many special provisions for IHEs

75

## Documentation requirements

- Rules are more flexible
- Charges must be supported by:
  - System of internal controls
  - In official records of entity
  - Reflect total compensated activity
  - Include Federal Government and Non-federal activity
  - Comply with entity's accounting policies
- Special, more flexible rules for IHEs

76

## Using budget estimates for salary allocations

- Use for interim accounting purposes, if
  - System produces reasonable estimates
  - Timely recording of significant changes
    - Short-term fluctuations can be ignored
  - Internal control system compares actuals with budgets

**Cost sharing should be supported  
the same as direct charges**

77

## Fringe benefits include time not worked

- Fringe benefits must be based on law, agreement, or established policy
- Can use cash basis (charge leave when it is taken)
- Can accrue leave costs
- When employment terminates, payments for leave are indirect costs

78

## Pension plan costs

- Pension accruals
  - Must conform to GAAP
  - Must be funded within 6 months of year end
- “Golden parachutes” are prohibited

79

## Legal defense costs

- All related costs are un-allowable if:
  - Organization is defending criminal, civil, or administrative charges, *and*
  - Organization loses or agrees with a compromise disposition
- Lots of detailed rules which should be consulted in the event of criminal or civil suits

80



## General governmental costs prohibited for State and Local Governments

- General governmental costs include:
  - Governor, State Legislature, Judiciary, etc.
  - General public support (e.g., police and fire)
- For Councils of Government and Tribes:
  - CEO direct costs are OK
  - 50% of such costs can be included in indirect cost rate without documentation
- Agency may approve **the travel costs** of general government employees if they are related to a specific award

81

## Idle facilities and idle capacity

- Idle facilities are unused, in excess of current needs
  - Generally un-allowable, but OK if needed for workload fluctuations
  - If the need for the facilities has been reduced because of changed circumstances, costs are OK for up to one year
- Reasonable idle capacity is OK

82

## Interest

- Generally un-allowable
- Building related interest OK:
  - for State and Local Governments, after October 1, 1980
    - For land, after September 1, 1995
  - For IHEs, after September 23, 1982
  - For non-profits, September 29, 1995
- For all equipment related interest is OK
- For fiscal years starting after December 31, 2015, interest related to acquiring intangible assets is OK

83

## Lobbying

- Costs to improperly influence Federal Executive Branch employee regarding a grant or regulation are un-allowable
- For IHEs and non-profits:
  - Attempts to influence any election, referendum, Federal or state legislation are un-allowable
  - OK to factually respond to legislative requests
  - OK to try to reduce costs or otherwise assist Federal grant

84

## Costs of memberships

- Professional, technical associations, and publications are OK
- Civic or community organizations are OK, with approval
- Country clubs or social clubs are un-allowable
- Organizations whose primary purpose is lobbying are un-allowable

85

## Rental costs

- Generally OK
- Only cost of ownership allowed if:
  - Sale and leaseback arrangement, or
  - Less-than-arms-length lease
- If GAAP requires treatment as capital lease
  - No more than maximum allowable if item was purchased at time of lease
  - Interest calculation based on rules in effect at theoretical purchase date

86

## Taxes

- OK if legally required to pay
- For State and Local Governments, taxes are not OK if:
  - They are self-assessed, and
  - They have a disproportionate effect on Federal programs

87

## Travel

- Generally OK
- Must conform to grantee's policies
- First or business class is un-allowable
- If no policy, use Federal rules
- Costs limited to commercial rates
- Direct foreign travel must be approved in advance

88

# QUESTIONS!

Remember  
E-mail me if you think of  
anything later!  
CharlesHester@msn.com

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## **OMB's Super-Circular**

*Understanding and Complying with the  
New Audits Requirements  
for Grants and Other Agreements*

***Charles W. Hester***

CPA, FCPA, CFF, CFE, CGFM, ICFP

90

## Subpart F: Single Audit Requirements

- General (§200.500)
- Audits (§200.501 – §200.507)
- Auditees (§200.508 – §200.512)
- Federal Agencies (§200.513)
- Auditors (§200.514 – §200.520)
- Management Decisions (§200.521)

91

## Subpart F: Single Audit Requirements

- A Non-federal entity that expends \$750,000 in Federal funds in a fiscal year must have a Single Audit or program-specific audit
- No Single Audit required if entity is below the threshold
- Federal funds do not include procurements
- Pass-through entities responsible for adequate review of sub-recipients

92

## Other audits must build upon the Single Audit

- Single Audit substitutes for other audit requirements
- GAO & OIGs must consider Single Audit and build upon it for their additional audits
- No restriction on GAO & OIGs from conducting audits
  - Federal Government must pay for them
- 2014 Compliance Supplement will contain a list of available program-specific audit guides

93

## Auditee responsibilities

- Procure the Single Audit
- Prepare financial statements
- Follow up and correct findings
- Provide the auditor with all necessary access to information
- Prepare Schedule of Expenditures of Federal Government Awards (SEFA)

94

## Auditor selection

- Use normal procurement processes
- Objective is to obtain high quality audit
- Must obtain the auditor's peer review report
- Consider experience, availability of staff, etc.
- Try for affirmative action
- Auditor who prepares indirect cost rate proposal for entity that receives over \$1 million in indirect costs cannot perform the audit

95

## Audit submission and follow-up

- Auditee must prepare schedule of prior findings
- Prepare corrective action plan for current findings
  - Show the status of findings
  - Can drop corrected findings
- Auditee must submit reporting package

96



Federal agency may act as cognizant agency or oversight agency for audits

- Cognizant: auditees receive >\$50 million
  - Provide technical audit advice, coordinate audits, etc.
  - Obtain or conduct quality control reviews of selected audits
  - Coordinate resolution of cross-cutting findings
- Otherwise oversight agency
  - May assume the responsibilities of a cognizant agency

97

## Auditor requirements

- Comply with GAGAS
- Cover the entire entity
- Cover the financial statements and SEFA
- Cover internal control
- Cover compliance & performance
- Follow up on prior findings
- Auditor must complete and sign parts of the Data Collection Form

98

## Reporting requirements

- Opinion on financial statements and SEFA
- Report on internal control over financial reporting and grant compliance
  - Show scope of testing and results
- Compliance for each major program
- Schedule of findings and questioned costs
- Material weaknesses and significant deficiencies

99

## Audit findings

- Known or likely questioned costs >\$25,000 for major programs
  - Provide information to help judge the prevalence and consequences of the questioned costs
- Known questioned costs >\$25,000 for non-major programs
- Explain any qualification of opinion on major programs
- Known or likely fraud
- Sufficient detail for a corrective action plan

100

## More requirements for audit findings

- Information about the programs
- Criteria and condition
- Statement of cause that can serve as a basis for recommendations
- Possible effect to enable agency or pass-through entity to facilitate prompt corrective action
- How the questioned costs were computed
- Whether the sample was statistically valid

101

## Major program determination

- Step one is identify the Type A programs (large dollar programs)
- Inclusion of large loan programs should not exclude other programs as Type A
- For most entities, Type A programs are larger of \$750,000 or 3% of total Federal funds expended

102

## Step two

- Identify “Type A” programs that are low risk by applying risk factors contained in §200.519 and determining that programs have:
  - Been audited as major in one of the last two years
  - No material weaknesses in internal control
  - No modified opinion on compliance
  - Questioned costs of less than 5% of funds expended in the program

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## Step three

- Identify “Type B” programs that are “high risk” by applying criteria contained in §200.519 but:
  - Limit the number of Type B programs on which to assess risk to  $\frac{1}{4}$  the number of Type A programs and
  - Use an approach which provides that different Type B programs are audited as major over time

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## Step four

- Determine and audit as major programs:
  - All Type A programs not determined to be low risk
  - All Type B programs determined to be high risk
  - Any additional needed to comply with the “percentage of coverage” rule

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## Percentage of Coverage Rule

- Current
  - For normal auditees, 50% of the Federal funds expended
  - For low risk auditees, 25% of the Federal funds expended
- Future (§200.518(f))
  - For normal auditees, **40%** of the Federal funds expended
  - For low risk auditees, **20%** of the Federal funds expended

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## Criteria to Be a “Low Risk” Auditee

- Audits completed annually and reporting packages submitted on time
- Unmodified opinions on financial statements and Schedule of Expenditures of Federal Awards
- No material weaknesses in internal control
- No doubt about ability to continue as a “going concern”

107

## Low-risk criteria (*continued*)

- No findings in the past two audits related to:
  - Material weakness in internal controls over major programs
  - Modified opinion on major program compliance
  - Known or likely questioned costs exceeding 5% of the total expended in a Type A program

108

## Management Decision

- The decision **must** clearly state whether or not the finding is sustained, the reasons, and the expected action
  - Federal Agency
  - Pass-through entity
  - Time requirements
  - Reference numbers

109

## OMB's Proposed changes to the Compliance Supplement

- Proposed guidance contained information on reducing the number of compliance issues to be tested
- Specific compliance issues not cited in the "Super-Circular"
- Will presumably show up in the 2016 Compliance Supplement

12/9/2015

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## OMB proposed six areas to be tested instead of fourteen

- Allowable activities and costs
  - Combines the first two issues in current compliance Matrix
- Cash management
- Eligibility
- Reporting
- Sub-grantee monitoring
- Special tests

12/9/2015

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## Seven areas would be dropped

- Davis-Bacon
- Equipment and real property management
- Matching, level of effort, and earmarking
- Period of availability of Federal funds
- Procurement and suspension and debarment
- Program income
- Real property acquisition and relocation assistance

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## June 2015 Compliance Supplement

- Part 1 – Background, Purpose, and Applicability
- Part 2 – Matrix of Compliance Requirements
- Part 3 – Compliance Requirements
- Part 4 – Agency Program Requirements
- Part 5 – Clusters of Programs
- Part 6 – Internal Control
- Part 7 – Guidance for Auditing Programs Not Included in This Compliance Supplement
- Appendices

12/9/2015

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## Part 1 – Background, Purpose, and Applicability

- Effective for audits of fiscal years beginning after June 30, 2014
- Auditors **shall** consider the Supplement and laws, regulations and OMB Guidance in determining compliance requirements
- Auditors should **not** consider the Supplement to be a “safe harbor” for identifying audit procedures.

12/9/2015

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## Part 2 – Matrix of Compliance Requirements

June 2015 Matrix of Compliance Requirements

CFDA	Types of Compliance Requirements													
	A: Activities Allowed or Unallowed	B: Allowable Cost/ Cost Principles	C: Cash Management	D: Reserved	E: Eligibility	F: Equipment and Real Property Management	G: Matching, Level of Effort, Earmarking	H: Period of Performance	I: Procurement and Suspension and Debarment	J: Program Income	K: Reserved	L: Reporting	M: Sub-recipient Monitoring	N: Special Tests and Provisions
10 – United States Department of Agriculture (USDA)														
10.000*	Y	Y	Y			Y		Y	Y	Y		Y		Y
10.500	Y	Y	Y			Y	Y	Y	Y	Y		Y	Y	Y
10.551	Y	Y	Y		See Part 4	Y	Y	Y	Y			Y	Y	Y
10.561														
10.553														
10.555	Y	Y	Y		Y	Y	Y	Y	Y	Y		Y	Y	Y
10.556														
10.539														
10.557	Y	Y	Y		Y	Y		Y	Y	Y		Y	Y	Y
10.558	Y	Y	Y		Y	Y	Y	Y	Y	Y		Y	Y	Y
10.566	Y	Y	Y		Y	Y	Y	Y	Y	Y		Y	Y	Y
10.565														
10.568	Y	Y	Y		Y	Y	Y	Y	Y			Y	Y	Y
10.569														
10.582	Y	Y	Y		Y	Y	Y	Y	Y			Y	Y	
10.665														Y
10.666	Y	Y	Y				Y	Y						
10.760	Y	Y	Y			Y	Y	Y	Y			Y		
10.781														
10.766	Y	Y	Y			Y		Y	Y			Y		
10.780														

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## Part 3 – Compliance Requirements

<b>A</b> = Activities Allowed or Un-allowed	<b>B</b> = Allowable Cost – Cost Principles
<b>C</b> = Cash Management	<b>D</b> = <i>Reserved</i>
<b>E</b> = Eligibility	<b>F</b> = Equipment and Real Property Management
<b>G</b> = Matching, Level of Effort, Earmarking	<b>H</b> = Period of Performance
<b>I</b> = Procurement and Suspension and Debarment	<b>J</b> = Program Income
<b>K</b> = <i>Reserved</i>	<b>L</b> = Reporting
<b>M</b> = Sub-recipient Monitoring	<b>N</b> = Special Tests and Provisions

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## Part 4 – Agency Program Requirements

- For each Federal program (except R&D & SFA) included provides:
  - Program Objectives and Program Procedures
  - Information about compliance requirements specific to a program
  - Other Information where it is considered useful
    - Example, when a program allows funds to be transferred to another program

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## Part 5 – Clusters of Programs

- As defined in 2 CFR §200.17 and §200.518
  - Research and Development (R&D)
  - Student Financial Aid (SFA)
  - Certain other programs designated by a State for Federal awards that the State provides to sub-recipients that meet the definition of “cluster of programs”

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## Part 6 – Internal Control

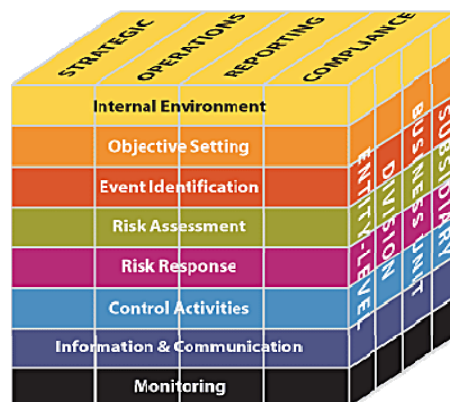
IN 2013, THE COMMITTEE OF SPONSORING ORGANIZATIONS OF THE TREADWAY COMMISSION (COSO) UPDATED THE “INTERNAL CONTROL – INTEGRATED FRAMEWORK,” AND, IN SEPTEMBER 2014, THE GOVERNMENT ACCOUNTABILITY OFFICE (GAO) ISSUED AN UPDATED “STANDARDS FOR INTERNAL CONTROL IN THE FEDERAL GOVERNMENT,” COMMONLY REFERRED TO AS “THE GREEN BOOK.” DUE TO THE NEED TO UPDATE OTHER PARTS OF THIS SUPPLEMENT FOR THE UNIFORM GUIDANCE IN 2 CFR PART 200, **OMB WAS UNABLE TO ALSO UPDATE PART 6** FOR THE REVISIONS TO COSO AND THE GREEN BOOK WITHOUT DELAYING THE ISSUANCE OF THIS SUPPLEMENT. SINCE THE **2014 VERSION OF PART 6 IS OUT OF DATE**, IT WAS NOT CARRIED FORWARD TO THIS SUPPLEMENT. NON-FEDERAL ENTITIES AND THEIR **AUDITORS SHOULD LOOK TO THE COSO AND GREEN BOOK FOR GUIDANCE** ON INTERNAL CONTROLS UNTIL PART 6 IS UPDATED. **OMB PLANS TO UPDATE PART 6 FOR THE 2016 COMPLIANCE SUPPLEMENT.**

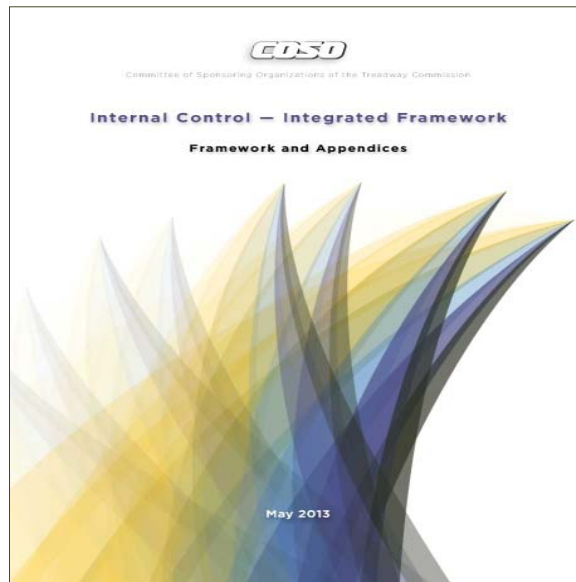
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## COSO's **New 2013** Internal Control Integrated Framework

- Has gained wide acceptance following financial control failures in the early 2000's
- Most widely used framework in the US
- Also widely used around the world





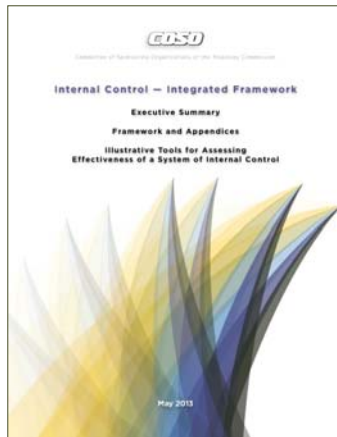
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## Key Concepts – Timeless

- A process
- Provides reasonable assurance
- Geared to Achievement of objectives related to
  - (1) operation,
  - (2) compliance, and
  - (3) reporting
- In a strategic planning - performance measurement setting

## Project deliverable #1 – Internal Control-Integrated Framework (2013 Edition)



- Consists of three volumes:
  - Executive Summary
  - Framework and Appendices
  - Illustrative Tools for Assessing Effectiveness of a System of Internal Control
- Sets out:
  - Definition of internal control
  - Categories of objectives
  - Components and principles of internal control
  - Requirements for effectiveness

## Project deliverable #2 – Internal Control over External Financial Reporting: A Compendium....



- Illustrates approaches and examples of how principles are applied in preparing financial statements
- Considers changes in business and operating environments during past two decades
- Provides examples from a variety of entities – public, private, not-for-profit, and government
- Aligns with the updated Framework

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# Summary of Updates

Update expected to increase ease of use and broaden application

## What was not changed...

- Core definition of internal control
- Three categories of objectives and five components of internal control
- Each of the five components of internal control are required for effective internal control
- Important role of judgment in designing, implementing and conducting internal control, and in assessing its effectiveness



## What was changed...

- Changes in business and operating environments considered
- Operations and reporting objectives expanded
- Fundamental concepts underlying five components articulated as principles
- Additional approaches and examples relevant to operations, compliance, and non-financial reporting objectives added

# Summary of Updates

Codification of 17 principles embedded in the original Framework

## Control Environment

1. Demonstrates commitment to integrity and ethical values
2. Exercises oversight responsibility
3. Establishes structure, authority and responsibility
4. Demonstrates commitment to competence
5. Enforces accountability

## Risk Assessment

6. Specifies relevant objectives
7. Identifies and analyzes risk
8. Assesses fraud risk
9. Identifies and analyzes significant change

## Control Activities

10. Selects and develops control activities
11. Selects and develops general controls over technology
12. Deploys through policies and procedures

## Information & Communication


13. Uses relevant information
14. Communicates internally
15. Communicates externally

## Monitoring Activities

16. Conducts ongoing and/or separate evaluations
17. Evaluates and communicates deficiencies

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 **The Green Book**  
 Internal control is the plans, methods, policies, and procedures an organization employs to ensure effective resource use in fulfilling its mission, goals, objectives, and strategic plan. GAO's Standards for Internal Control in the Federal Government, known as the Green Book, sets these standards for federal agencies.  
[View 2013 Exposure Draft](#) [View Current Green Book](#)





[View the Green Book Exposure Draft](#) [View the Current Green Book](#) [Listen to Our Green Book Podcast](#)

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Federal Managers' Financial Integrity Act (FMFIA) requires that federal agency executives periodically review and annually report on the agency's internal control systems. FMFIA requires the Comptroller General to prescribe internal controls standards. These internal control standards, first issued in 1983, present the internal control standards for federal agencies for both program and financial management.

**Revising the Green Book**  
 Green Book revisions undergo an extensive, deliberative process, including public comments and input from the Green Book Advisory Council. GAO considers all Green Book comments and input from the Green Book Advisory Council in finalizing revisions to the standards.

**Timeline: Green Book and Related Publications**

			
2013 Exposure Draft GAO-13-830SP, Sep, 2013	Internal Control Management and Evaluation Tool GAO-01-1008G, Aug, 2001	View the Current Green Book GAO(AIMD)-00-21.3.1, Nov 1, 1999	1983 GAO, Accounting Series, Standards for Internal Controls in The Federal Government Jan 1, 1983

**GAO** United States Government Accountability Office  
 By the Comptroller General of the United States

September 2014

**Standards for Internal Control in the Federal Government**

GAO-14-704G



## Part 7 – Guidance for Auditing Programs Not Included

- Purpose is to provide the auditor with guidance on how to identify the applicable compliance requirements for programs not included and for program-specific audits when a guide is not available.
  - The Compliance Supplement only includes the largest and/or riskiest Federal programs.

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## Appendices to the Compliance Supplement

- I – Federal Programs Excluded from the A-102 Common Rule and Portions of Part 200
- II – Federal Agency Codification of Government-wide Requirements and Guidance for Grants and Cooperative Agreements
- III – Federal Agency Single Audit and Program Contacts
- IV – Internal Reference Tables

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## Appendices - *Continued*

- V – List of Changes for the 2015 Compliance Supplement
- VI – Program-Specific Audit Guides
- VII – Other Audit Advisories
- VIII – SSAE 16 Examinations of EBT Service Organizations
- IX – Compliance Supplement Core Terms

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## Program-Specific Audit Guides

- **Department of Agriculture** ([www.usda.gov/oig/rptsauditsgde](http://www.usda.gov/oig/rptsauditsgde))
  - Food and Nutrition Service - Audits of Multi-State Food Processors, (Report No: 27009e), 11/30/1999
- **Department of Housing and Urban Development**
  - HUD Consolidated Audit Guide ([www.hudoig.gov/reports-publications/audit-guides/consolidated-audit-guides](http://www.hudoig.gov/reports-publications/audit-guides/consolidated-audit-guides))
- **Department of Energy**
  - DOE Audit Guidance for For-Profit Recipients, April 2012 [energy.gov/management/downloads/policy-flash-2012-39](http://energy.gov/management/downloads/policy-flash-2012-39) and related Frequently Asked Questions ([energy.gov/sites/prod/files/For-Profit%20Audit%20Guidance%20FAQs%20June%202012.pdf](http://energy.gov/sites/prod/files/For-Profit%20Audit%20Guidance%20FAQs%20June%202012.pdf))

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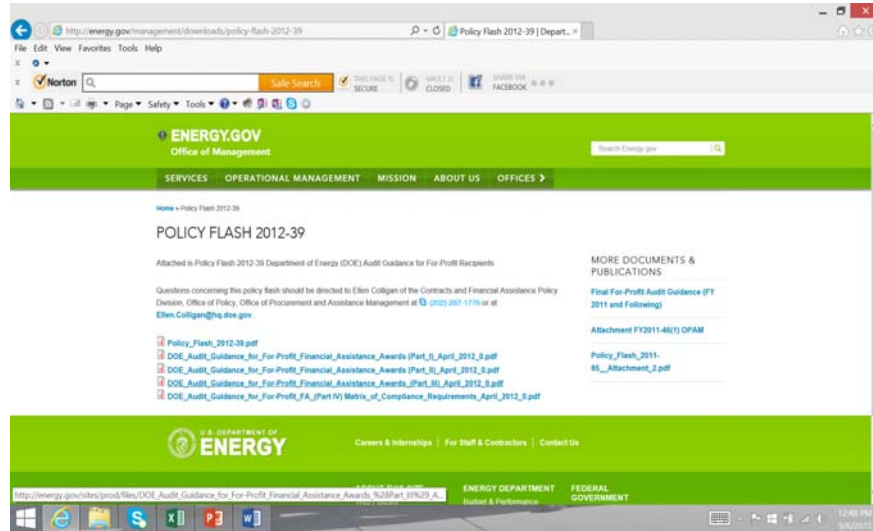
# USDA - OIG

The screenshot shows the USDA Office of Inspector General website. The browser address bar displays "http://www.usda.gov/oig/ghauidguide.htm". The page features a search bar, a navigation menu with "Home", "Newsroom", "About OIG", "Web Content", "What's New", "FOIA", and "Contact Us", and a "News Releases and Reports" section. The "Audit Guide" section lists several reports, including "8/29/2004 - OIG - USDA Office of Inspector General Audit Program for the Rural Housing Service Rural Rental Housing Program (RHP) (Size: 95,700 bytes)", "11/20/1999 - FNS - Audit of Public-Private Food Processing (PFP) (Report No: 27004, Size: 330,339 bytes)", "10/12/1999 - FNS - Summer Food Service Program for Children (SFC) (Report No: 52-7027-89, Size: 2,812,123 bytes)", and "1/18/1999 - Memorandum to PHS Revisions of Audit Guide for the Child and Adult Care Food Program (CACFP) (Report No.: Size: 403,647 bytes)". A "Review Guides" section lists "1/24/1999 - Review Guidelines For Service Organizations Providing Electronic Benefits Transfer Services For Government Programs in Accordance With SAS-70 (PDF) (Report No.: Size: 403,647 bytes)". The page also includes a "Newsroom" section with links for "View OIG Information", "View OIG Semi-Annual Report", and "View OIG Strategic Plan (PDF)". A "Media Help" section provides instructions for viewing PDF files and Flash files. The footer shows the date "12/9/2015" and the page number "133".

# HUD - OIG

The screenshot shows the HUD Office of Inspector General website. The browser address bar displays "https://www.hudog.gov/reports-publications/audit-guides/consolidated". The page features a navigation menu with "Home", "Reports & Publications", "About", "Fraud Prevention", "Newsroom", and "Report Fraud". The "Consolidated Audit Guides" section is highlighted. The "Table of Contents" lists several chapters, including "Chapter 1 - General Audit Guidance" (with a sub-link for "Transmittal Letter (Issued May 2013)"), "Chapter 2 - Reporting Requirements and Sample Reports" (with sub-links for "Audit Guide Chapter 2 - Reporting Requirements and Sample Reports (Issued March 2013)", "Chapter 2 Change 15 - Transmittal Letter (Issued March 2013)", and "Chapter 2 - Transmittal Letter (Issued January 2013)"), "Chapter 3 - HUD Multifamily Housing Programs" (with a sub-link for "Transmittal Letter"), "Chapter 4 - Mortgage Insurance for Hospitals Program" (with a sub-link for "Transmittal Letter"), and "Chapter 5 - Insured Development Cost Certification Audit Guidance" (with a sub-link for "Transmittal Letter"). The page also includes a "Reports & Publications" section with links for "Semiannual Reports", "Audit Guide", "Consolidated Audit Guide", "Popular Publications", "Audit Reports & Memorandums", "Inspections & Evaluations", "Latest Peer Review", "Audit Plans", and "Conference Expenditures". A "Stay Connected" section includes social media icons for Facebook, Twitter, and YouTube. The footer shows the date "12/9/2015" and the page number "134".

# DOE – Management



12/9/2015

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## Subpart D – Single Audit Information for Recipients of Recovery Act Funds

- Procedures (§176.200 )
- Award Terms – Recovery Act transactions listed in Schedule of Expenditures of Federal Awards and Recipient Responsibilities for Informing Sub-recipients (§176.210)

12/9/2015

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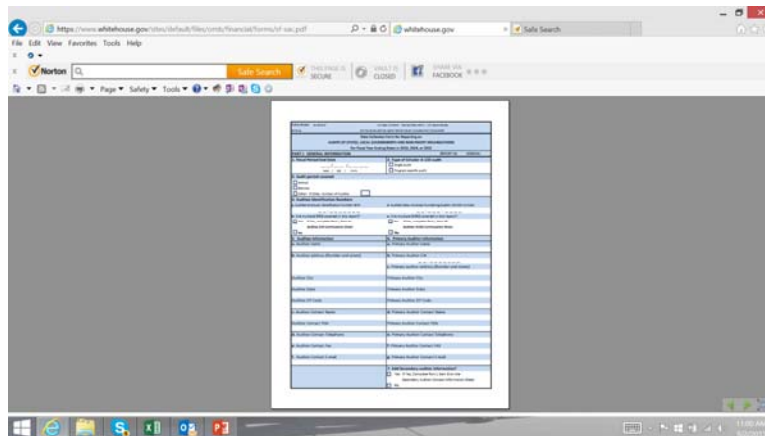
## ARRA Award Terms

- Subpart A – Reporting and Registration Requirements Under Section 1512 of the 2009 ARRA
- Subpart B – Buy American Requirements Under Section 1605 of the 2009 ARRA
- Subpart C – Wage Rate Requirements under Section 1606 of the 2009 ARRA
- Subpart D – Single Audit Information for Recipients of Recovery Act Funds

12/9/2015

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## Data Collection Form (SF-SAC)

A screenshot of a web browser window showing a data collection form titled "Data Collection Form (SF-SAC)". The browser's address bar displays the URL "https://www.whitehouse.gov/sites/default/files/omb/financial/termsofaw.pdf". The form itself is a complex table with multiple columns and rows, containing various fields for data entry. The browser interface includes a search bar, navigation buttons, and a taskbar at the bottom with icons for Windows, Internet Explorer, and other applications. The system clock in the bottom right corner shows "11:59 AM 12/9/2015".

12/9/2015

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## Changes to SF-SAC

- Part I – General Information
- Part II – Financial Statements (To be completed by Auditor)
- Part III – Federal Programs (To be completed by Auditor)

12/9/2015

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## Requirements for Pass-through Entities

- **§200.425 = *May*** charge Federal awards for the cost of agreed-upon-procedures engagements to monitor sub-recipients. Costs are allowable **only if**:
  1. Conducted in accordance with GAGAS,
  2. Paid for and arranged by the pass-through entity,  
**and**
  3. Limited to activities allowed or un-allowed; allowable cost/cost principles, and reporting.

12/9/2015

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## GAGAS 2011

- Chapter 5 = Standards for Attestation Engagements
  - Introduction
  - Examination Engagements
  - Review Engagements
  - Agreed-Upon Procedures Engagements

12/9/2015

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## Agreed-Upon Procedures Engagements

- Additional GAGAS Field Work Requirements
  - Communicating significant deficiencies; material weaknesses; instances of fraud; non-compliance with laws, regulation and agreements; and abuse
- Additional GAGAS Reporting Requirements
  - Reporting auditors' compliance with GAGAS; and distributing reports
- Additional GAGAS Considerations
  - Establishing an understanding regarding services to be performed; and reporting

12/9/2015

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## AICPA's SSAE

- **AT 20** = Defining Professional Requirements in SSAEs
- **AT 50** = SSAE Hierarchy
- **AT 101** = Attest Engagements
  - AT 9101 = Interpretations of AT 101
- **AT 201** Agreed-Upon Procedures
  - Interpretations of AT 201
- **AT 301** = Financial Forecasts and Projections

12/9/2015

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## AICPA's SSAE - *Continued*

- **AT 401** = Reporting on Pro Forma Financial Information
- **AT 501** = Examination on an Entity's Internal Control over Financial Reporting that is Integrated with an Audit of its Financial Statements
  - Interpretations of AT 501

12/9/2015

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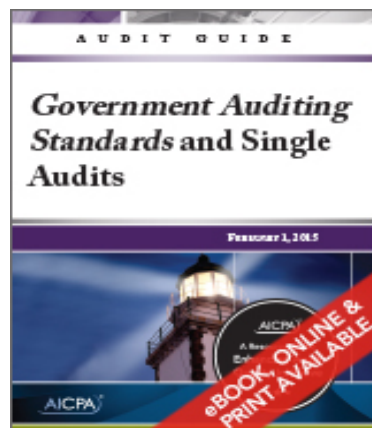
## AICPA's SSAE - *Continued*

- **AT 601** = Compliance Attestation
- **AT 701** = Management's Discussion and Analysis
- **AT 801** = Reporting on Controls at a Service Organization
  
- **QC 10** = A Firm's System of Quality Control

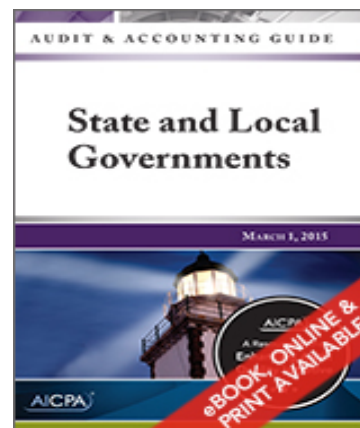
12/9/2015

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## AICPA's Revised Guides



12/9/2015



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# Agreed-Upon Procedures Audits

- Non-traditional Audits
  - Applying Agreed-Upon Procedures to Specified Financial Statement Elements
  - Applying Agreed-Upon Procedures to Non-Financial Information
  - Reporting on Specified Elements
  - Reporting on Compliance

12/9/2015

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# Agreed-Upon Procedures Audits - *Continued*

- Non-traditional Audits
  - Reporting on Internal Control
    - **Control Self-Assessment**
  - Risk Assessment Services
  - Performance Measurement Services

12/9/2015

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# QUESTIONS!

Remember  
E-mail me if you think of  
anything later!  
CharlesHester@msn.com

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## **OMB's Super-Circular**

*Understanding where they are going next so  
as to be ahead of the curve!*

***Charles W. Hester***

CPA, FCPA, CFF, CFE, CGFM, ICFP

150

The screenshot shows the top portion of a website. On the left is the CFO Council logo, which includes the text "United States", "CFO", and "Financial Officers Council". To the right of the logo is the text "Office of Executive Councils, Chief Financial Officers Council". Further right is a search bar with the placeholder text "SEARCH SITE" and a magnifying glass icon. Below this is a dark blue navigation bar with white text for "ABOUT CFOC", "CFO COUNCIL INITIATIVES", "NEWS/EVENTS", "RESOURCES", and "COFAR". The main content area features a photograph of a classical building facade. Overlaid on the right side of the photo is a blue vertical menu with white text listing: "Uniform Guidance", "Resources for Uniform Guidance", "Measuring Impact of Uniform Guidance", "Uniform Guidance Training Webcasts", "Federal Spending Transparency", and "About COFAR". The number "151" is visible in the bottom right corner of the screenshot.

## So, do we have any clues?

- **2 C.F.R. 300 through 5999**
- Council of Financial Assistance Reform (COFAR) Q&As
  - The CFO Council
- Digital Accountability and Transparency Act of 2014 (DATA Act)
  - P.L. 109-282 as amended by Section 6202(a) of P.L. 110-252 (31 U.S.C. 6101)
- OMB Memorandum M-14-17, Metrics for Uniform Guidance (200 CFR 200) dated Sept. 30, 2014

## ECONOMIC UPDATE AND OUTLOOK



Dr. Mike Walden

Reynolds  
Distinguished  
Professor

North Carolina State  
University

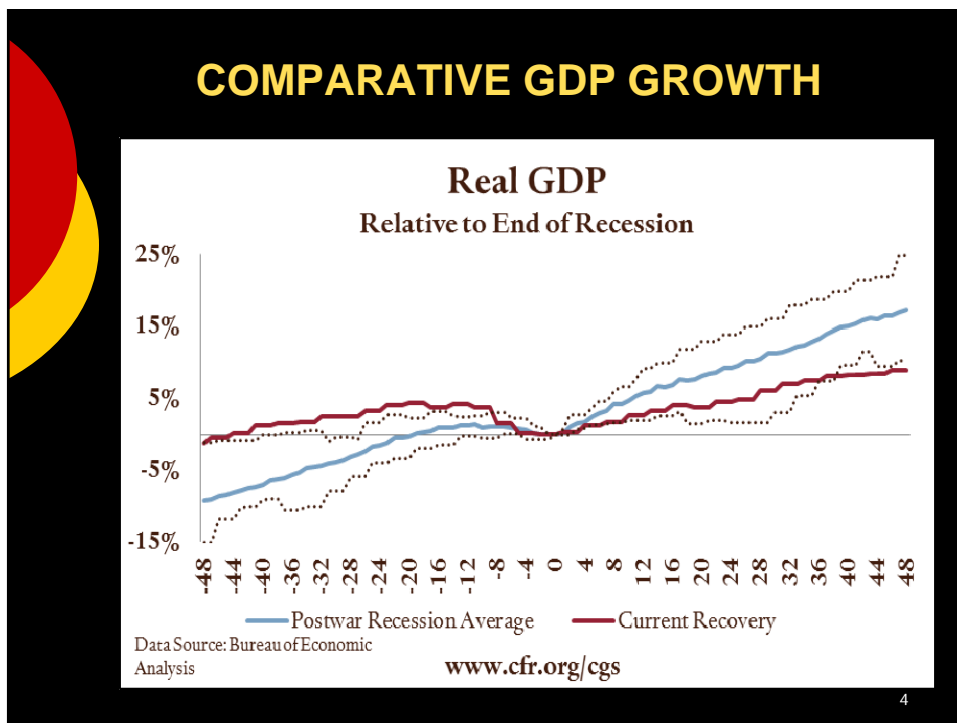
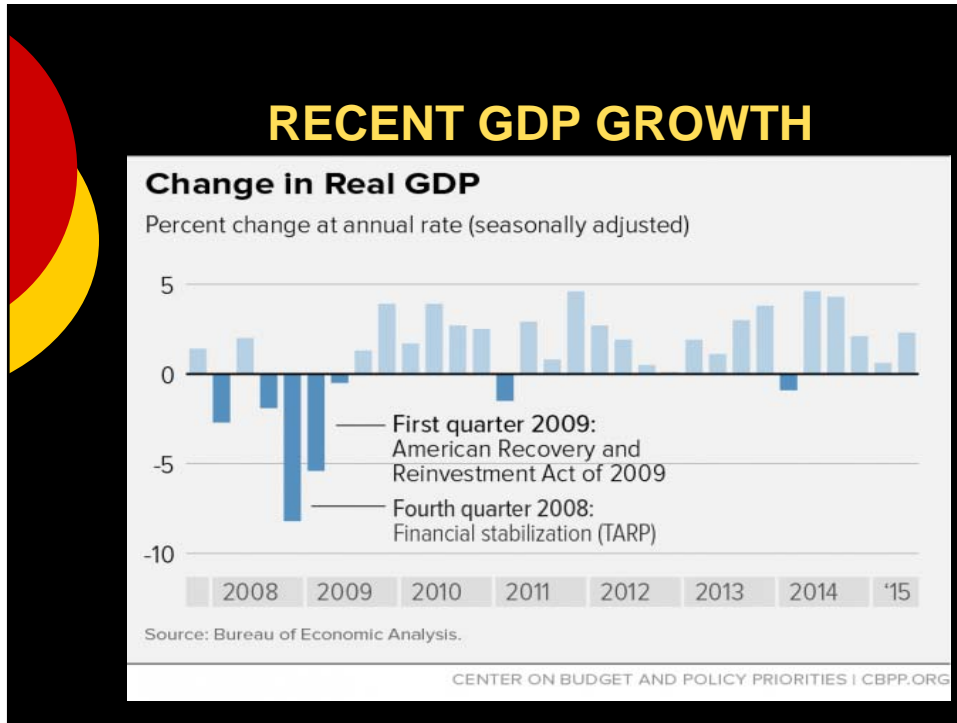
1

## THE NATIONAL ECONOMY

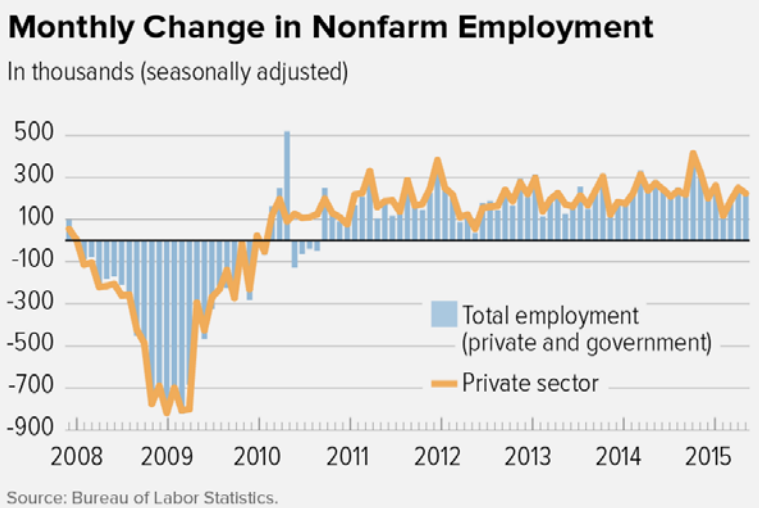


THE EFFECTS OF  
THE FINANCIAL  
CRASH STILL  
LINGER

2

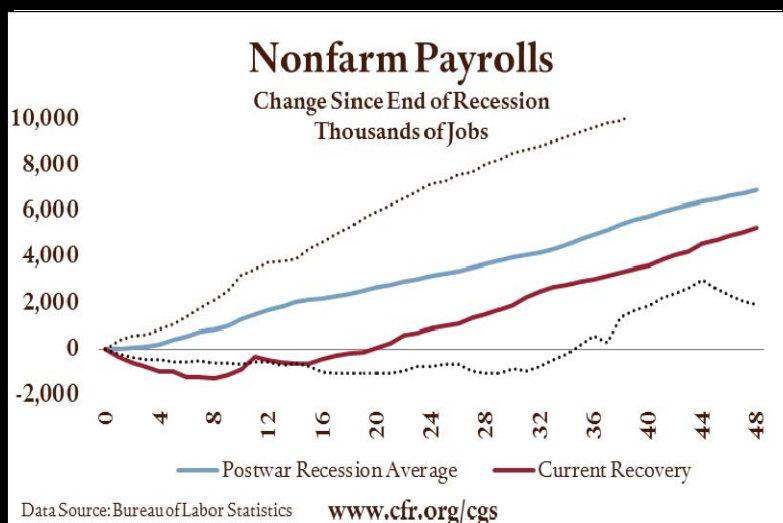


## RECENT JOB GROWTH



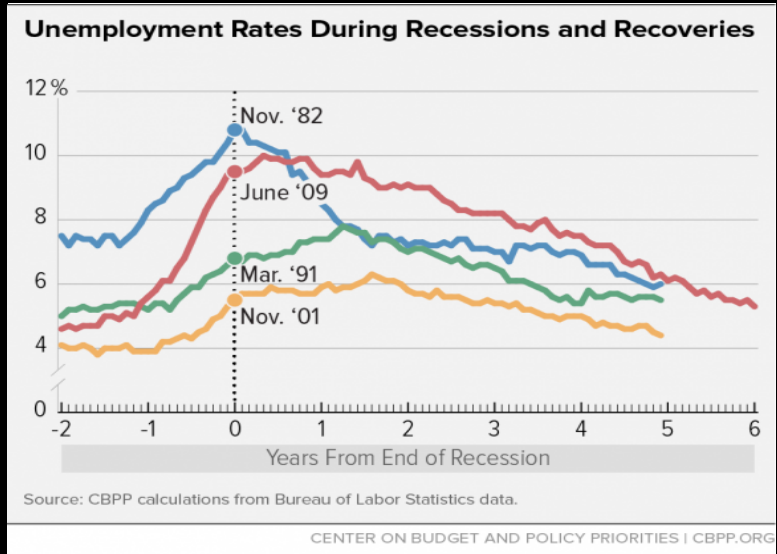
CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

## COMPARATIVE JOB GROWTH

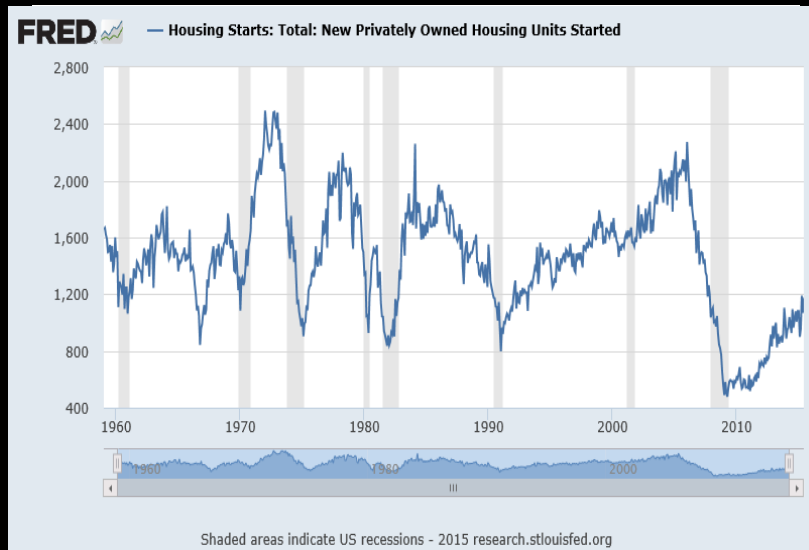


6

## JOBLESS RATE TRENDS IN RECENT RECOVERIES



## HOUSING CONSTRUCTION IS ALSO BELOW RATE OF EARLIER RECOVERIES

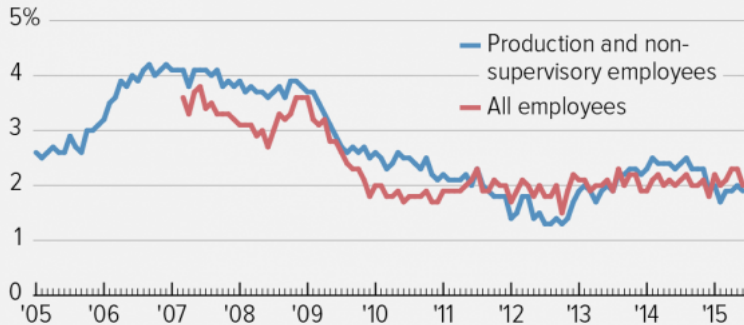




## WHY THE SLOW RECOVERY? 1. WAGE GAINS HAVE BEEN SLOW

### Average Hourly Earnings: Private Sector

Change in average hourly earnings from one year earlier



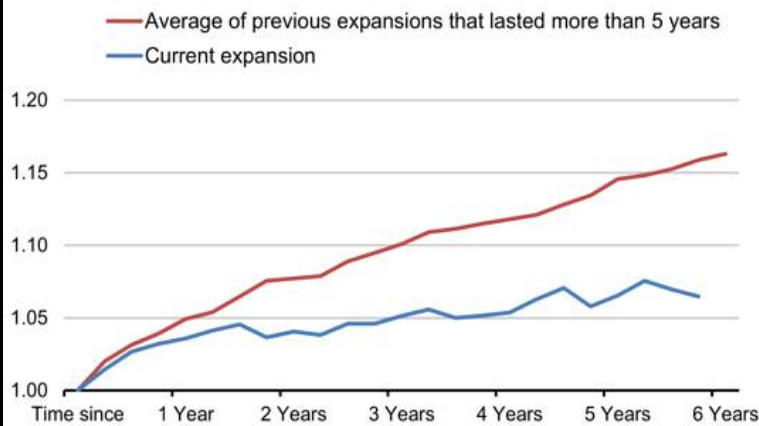
Source: CBPP calculations from Bureau of Labor Statistics Data

CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

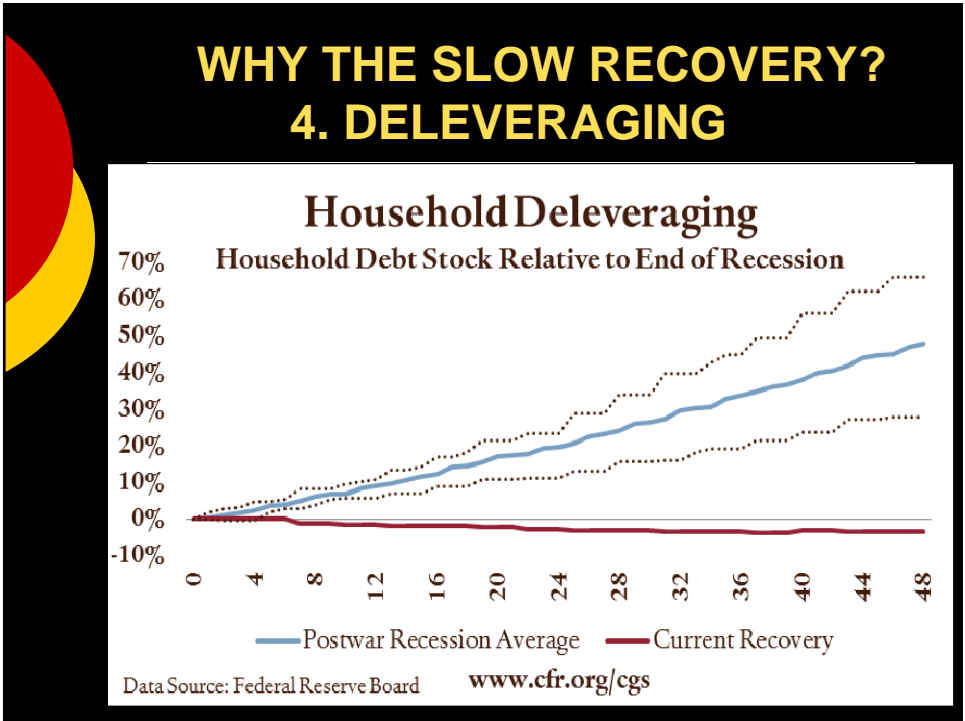
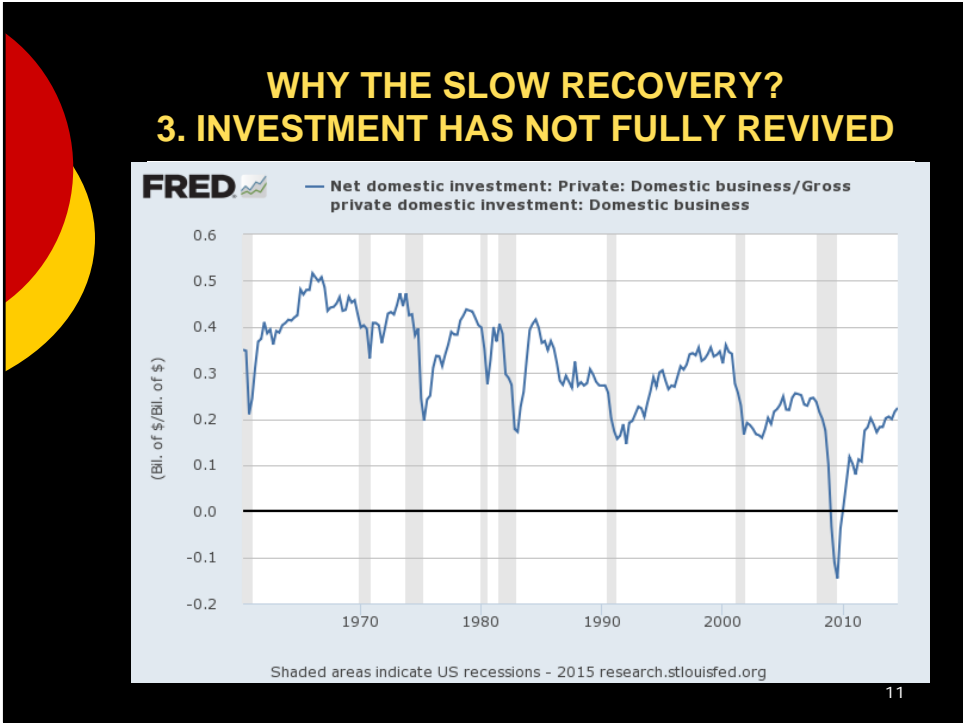
## WHY THE SLOW RECOVERY? 2. PLODDING PACE OF PRODUCTIVITY

### Productivity's Plodding Pace

Nonfarm productivity. Index: 1.00=trough of business cycle



Source: Labor Department | WSJ.com

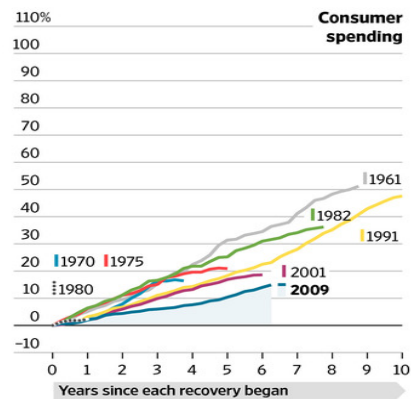
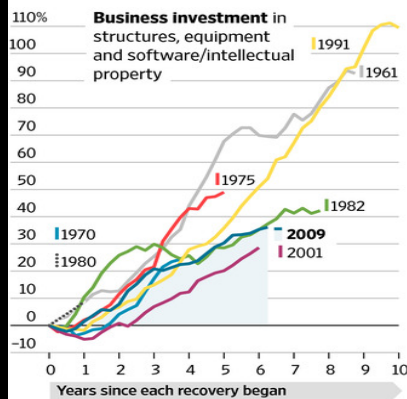


## 5. BUSINESS AND CONSUMER SPENDING HAVE BOTH BEEN SLOW

### Business Investment Cools

Pent-up demand fueled businesses' capital expenditures early in the expansion, but that spending has leveled off, creating an obstacle to present and future growth.

Change since each recovery began, adjusted for inflation

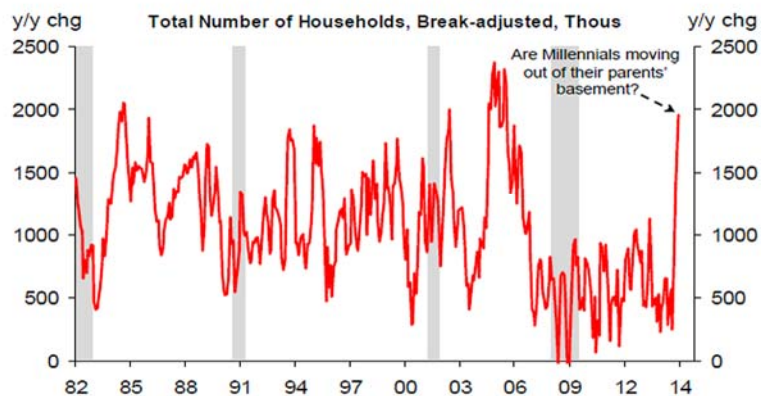


Note: All figures adjusted for seasonality  
Source: Commerce Department

Andrew Van Dam and Eric Morath/THE WALL STREET JOURNAL

## WHY THE SLOW RECOVERY? 6. SLOW HOUSEHOLD FORMATION

Household formation has increased dramatically in recent months



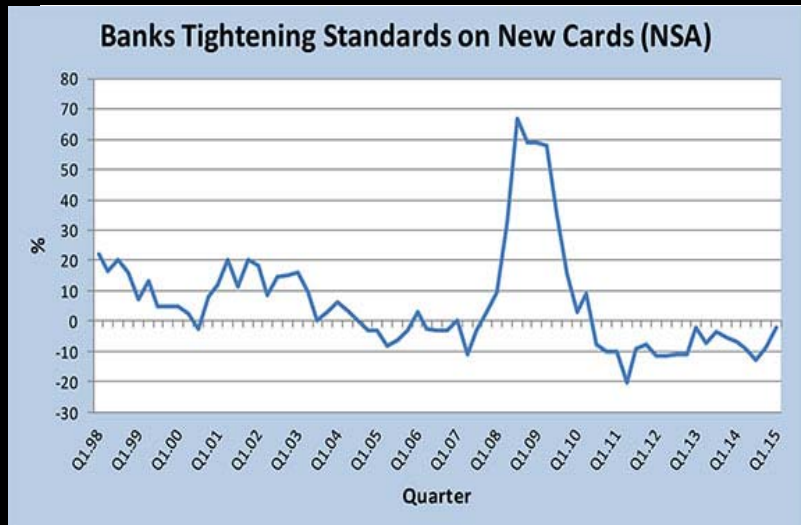
Source: Census, Haver Analytics, DB Global Markets Research

Deutsche Bank Research

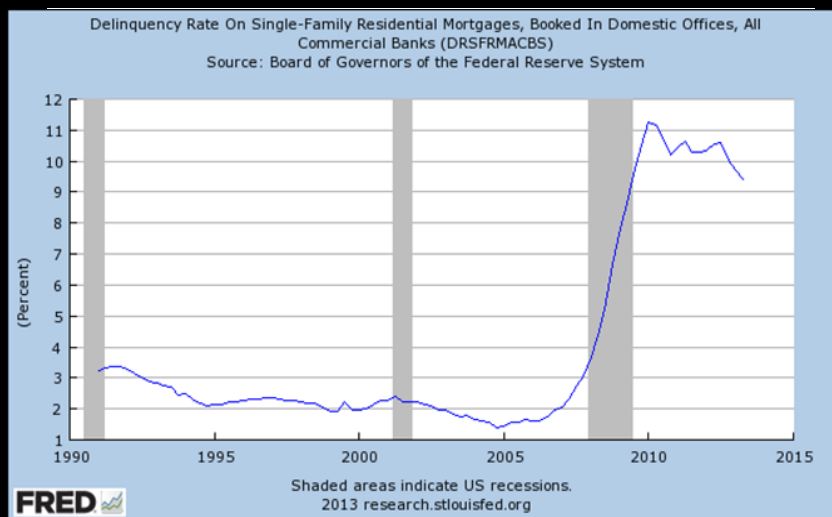
January 2015

25

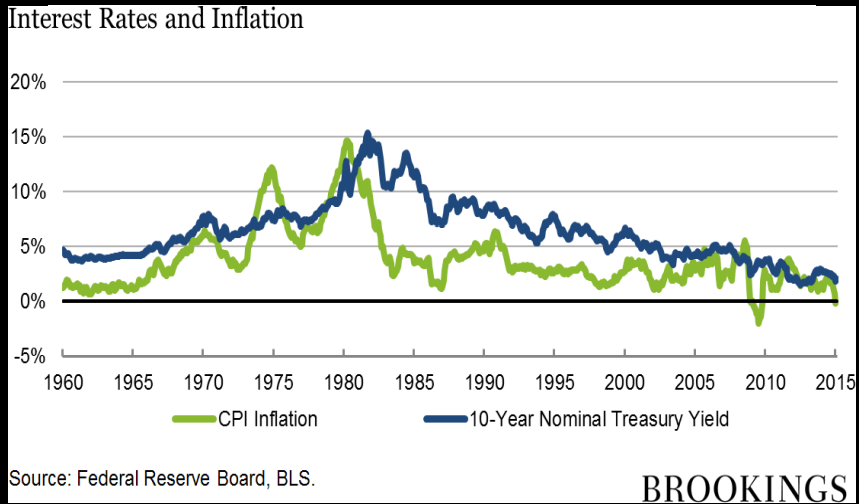
## WHY THE SLOW RECOVERY? 7. CREDIT IS STILL RELATIVELY TIGHT



## IN PART BECAUSE MANY HOUSEHOLDS STILL HAVE CREDIT ISSUES

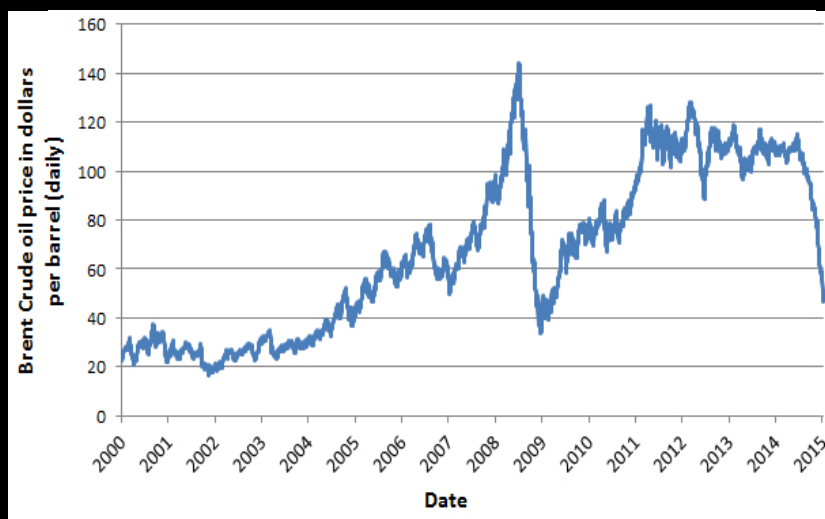


## EVEN THOUGH INTEREST RATES AND INFLATION HAVE BEEN LOW



17

## AND OIL PRICES HAVE BEEN FAVORABLE



18

## U.S. FORECASTS

---

EXPECT HOUSEHOLD FORMATION  
AND BORROWING TO ACCELERATE:  
GDP ANNUAL GROWTH OF **2.5-3.0%**  
**2.5-3 MILLION** ANNUAL NEW JOBS  
**SLIGHT UPTICK** IN INTEREST RATES  
AND INFLATION  
**3 YEARS AWAY** FROM A PAUSE ("R")

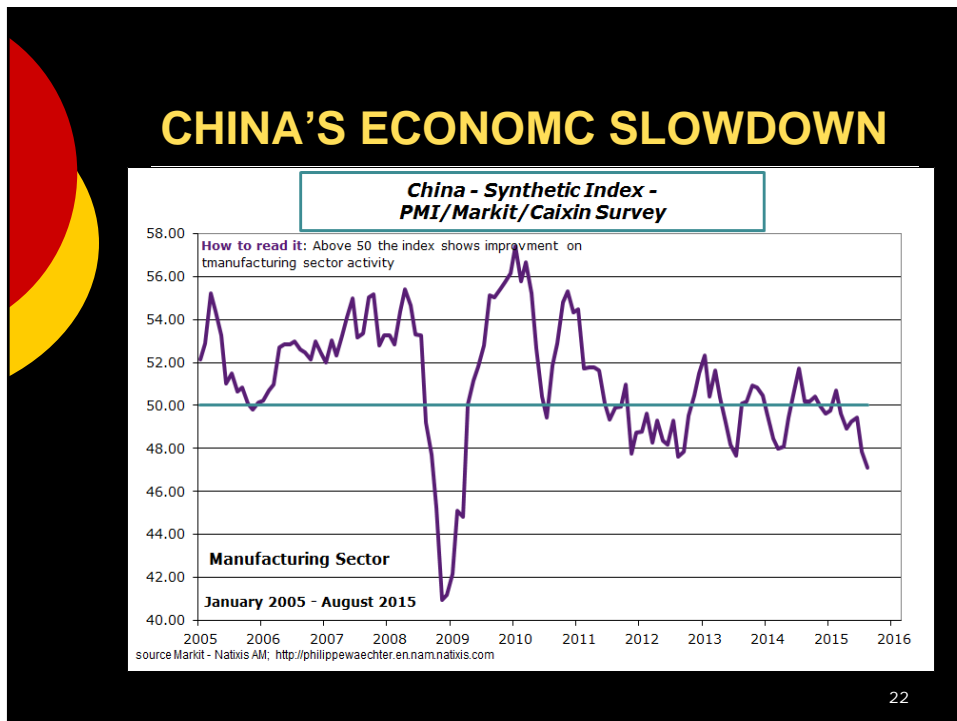
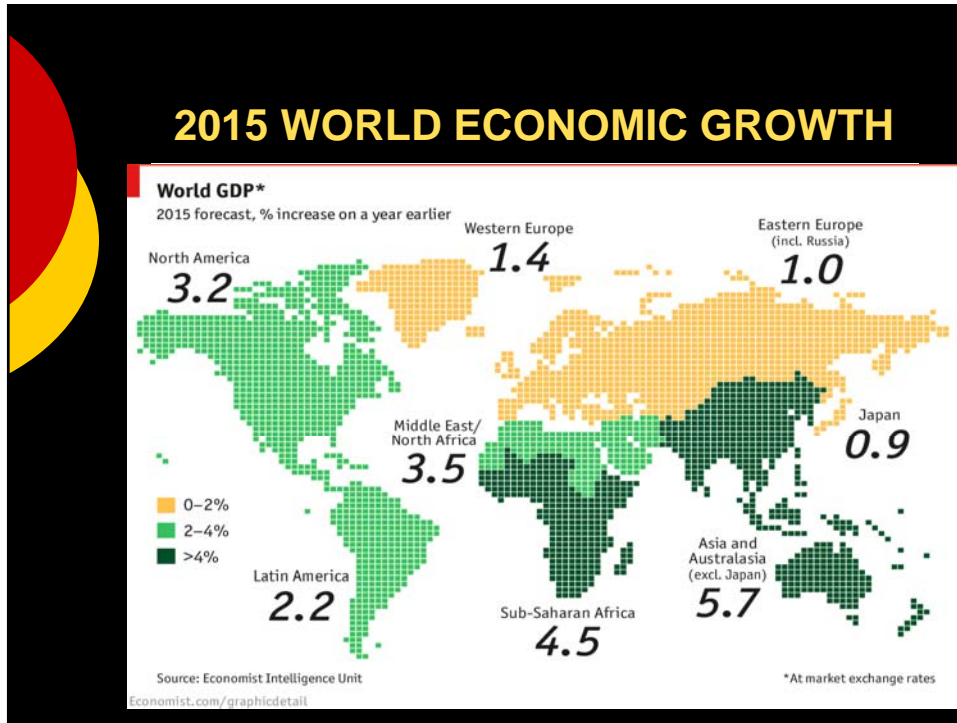
19

## THE INTERNATIONAL ECONOMY

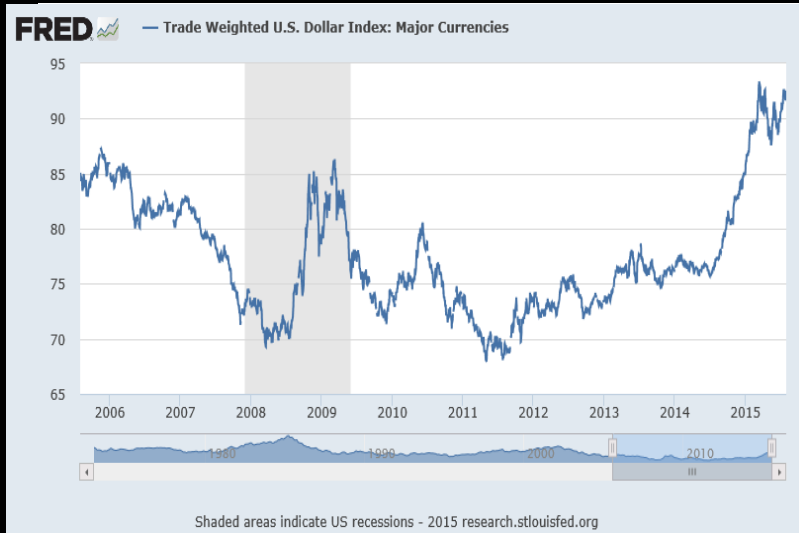
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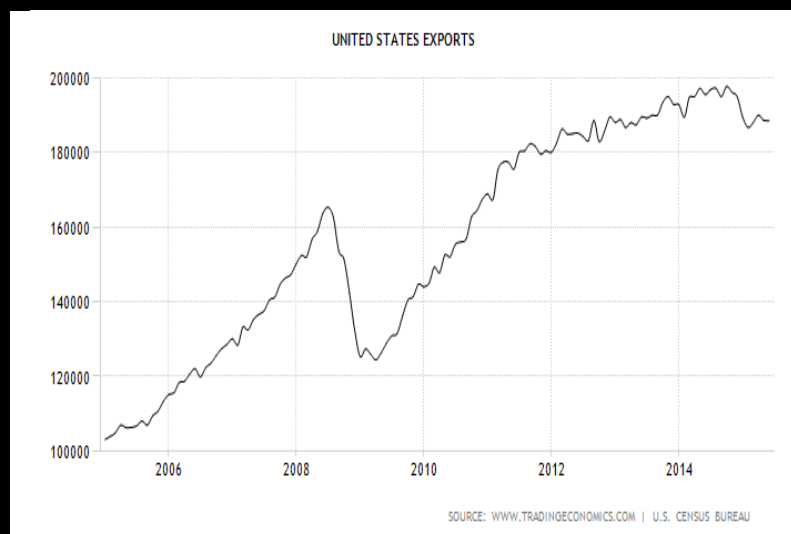
20



## U.S. DOLLAR'S INTERNATIONAL VALUE HAS INCREASED

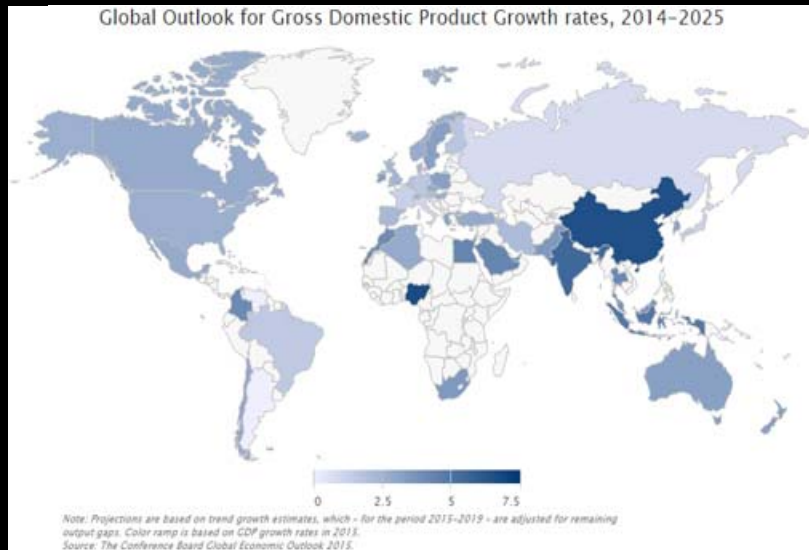


## BUT THIS HAS IMPAIRED U.S. EXPORTS

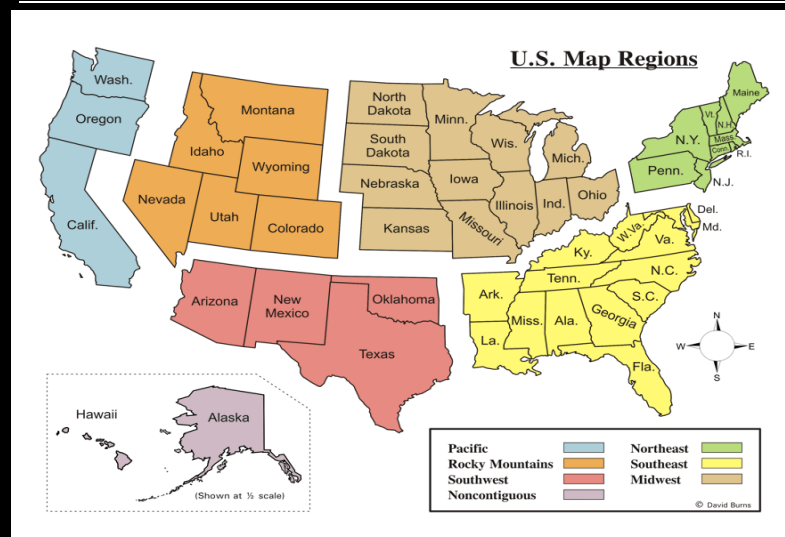


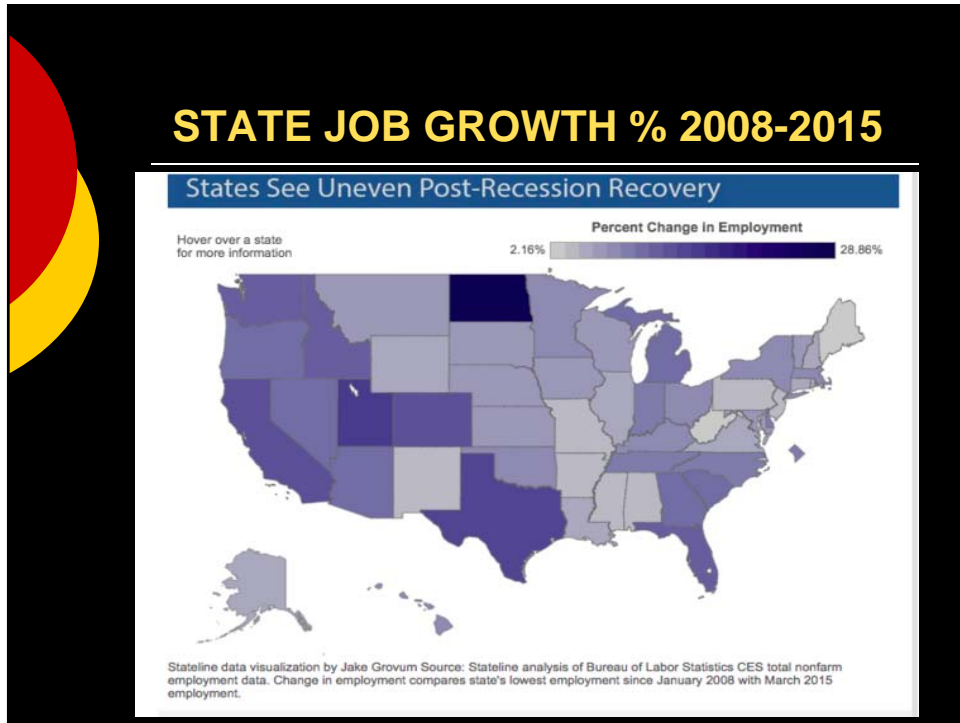


# LONG-RUN WORLD ECONOMIC GROWTH FORECASTS



# U.S. REGIONAL PERFORMANCE



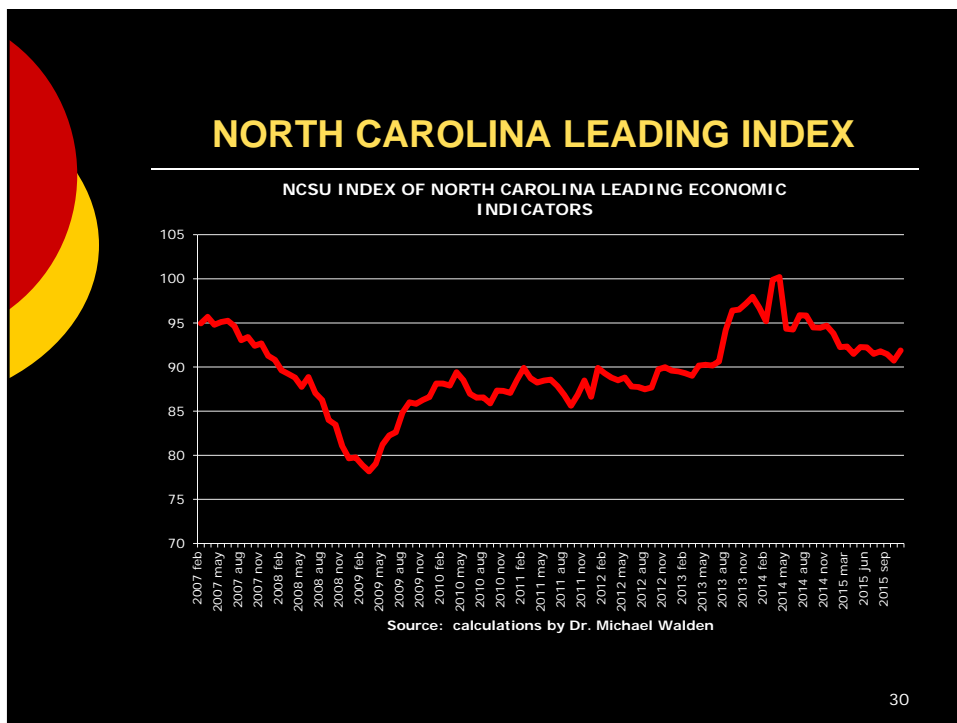
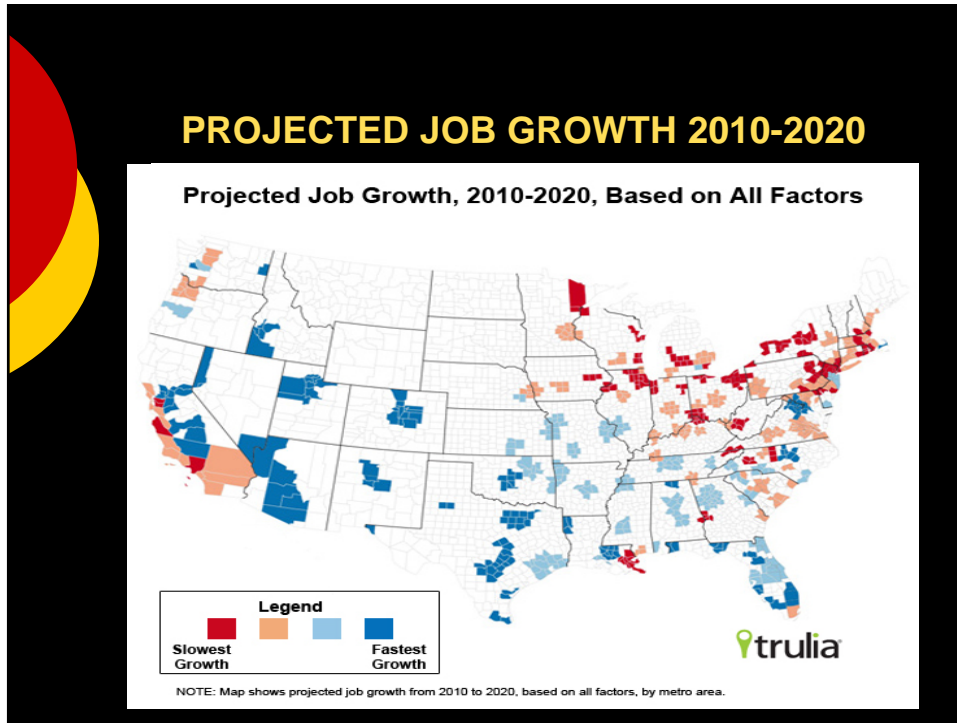


## WHY IS NC'S JOBLESS RATE STILL HIGHER THAN THE US RATE?

OCTOBER: 5.7% vs. 5.0%

	US	NC
HH Job Growth	1.2%	2.8%
Payroll Job Growth	2.0%	2.2%
Labor Force Growth	0.5%	2.9%

28




## LONG-RUN FACTORS IMPACTING THE ECONOMY



31

## 1. AGING



<u>% Over Age 65</u>	
2010:	13%
2050:	21%

32

## 2. TECHNOLOGICAL UNEMPLOYMENT



**HALF** OF TODAY'S OCCUPATIONS COULD BE DOWNSIZED DUE TO TECHNOLOGY

NEED FOR **RE-SKILLING**

33

## 3. DATA AND EFFICIENCY



GREATER AVAILABILITY OF DATA AND DATA ANALYSIS WILL SPARK MAJOR GAINS IN **RESOURCE EFFICIENCY** AND IN SERVICES LIKE **HEALTH CARE AND EDUCATION**

34

## 4. CHANGES IN MANUFACTURING



MORE TECHNOLOGY –  
REDUCES VALUE OF  
LOWER COST  
FOREIGN LABOR

3D PRODUCTION –  
SHIFT PRODUCTION  
TO HOMES?

35

## 5. VIRTUALIZATION



COULD CHANGE:

- \* RESIDENTIAL  
PATTERNS
- \* RETAILING
- \* TOURISM

36

## 6. LESS OWNING, MORE RENTING?

---



PEOPLE STOP  
OWNING VEHICLES;

USE APPS TO  
SUMMON  
DRIVERLESS  
VEHICLES WHEN  
NEEDED

37

## BIG QUESTION

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**ECONOMIC  
OPPORTUNITY**

WHAT WILL THESE  
CHANGES DO TO  
THE STANDARD OF  
LIVING AND  
INCOME  
DISTRIBUTION?

38

## THE FUTURE WILL BE:



UNPREDICTABLE,  
CHALLENGING,  
BUT EXCITING !!

39

## THANK YOU!



40





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# Office of State Controller Financial Conference State Auditor's Update

December 15, 2015

**Beth A. Wood, CPA, State Auditor**

1

## State Auditor's Update Objectives



- 
- ✓ **Single Audit Update**
    - ✓ **Findings Presentation**
    - ✓ **Sampling**
    - ✓ **Subrecipient Monitoring**
  - ✓ **Discussion of the Affect of Super Circular on Future Audits of Federal Grants**
  - ✓ **Discussion Agency Financial Statement Audits**
  - ✓ **Legislative Request – Medicaid Eligibility**

2

**State Auditor's Update  
Single Audit**



- ✓ **Audit of Financial Statements**
  - ✓ **Opinion**
  - ✓ **2 Reports**
- ✓ **Audit of Compliance w/ Federal Program Requirements**
  - ✓ **Opinion**
  - ✓ **Report on Internal Controls**

3

**State Auditor's Update  
Single Audit**



- ✓ **\$21B – Federal Expenditures**
  - ✓ **\$3.3B Expenditures  
Subrecipient**

4

## State Auditor's Update Single Audit



- ✓ Medicaid - **\$8.6B**
- ✓ SNAP - **\$2.5B**
- ✓ SFA Cluster- **\$2.3B**
- ✓ Unemployment Insurance - **\$768M**
- ✓ Child Nutrition - **\$512M**
- ✓ Title I LEAs - **\$395M**
- ✓ CHIPS - **\$314M**

5

## State Auditor's Update Single Audit – Findings Presentation



- ✓ **Finding 2014-075**
  - ✓ Dept. Processed 119M+ Payments
  - ✓ \$10B Total Expenditures
  - ✓ Sample 272 Items = \$2,538,654 Exp.
  - ✓ 66 Errors = \$464,942 Net Overpayments
    - ✓ Federal Portion = \$303,169
    - ✓ State Portion = \$161,773

6

## State Auditor's Update

### Single Audit – Findings Presentation

---



- ✓ **Finding 2014-075 (FY 2015)**
  - ✓ Dept. Processed 119M+ Payments
  - ✓ \$10B Total Expenditures
  - ✓ Sample 272 Items = \$2,538,654 Exp.
  - ✓ 66 Errors = \$464,942 Net Overpayments
    - ✓ Federal Portion = \$303,169
    - ✓ State Portion = \$161,773
  - ✓ Projected Errors to Total Expenditures = **\$1.4 B Overpayments**

7

## State Auditor's Update

### Single Audit – Findings Presentation

---



- ✓ **Finding 2014-075**
  - ✓ Dept. Processed 10M Payments
  - ✓ \$413 Million Total Expenditures
  - ✓ Sample 126 Items = \$561,110
  - ✓ 16 Errors = \$245 Net Overpayments
    - ✓ Federal Portion = \$186
    - ✓ State Portion = \$59

8

## State Auditor's Update

### Single Audit – Findings Presentation

---



- ✓ **Finding 2014-075 (FY 2015)**
- ✓ Dept. Processed 10M Payments
  - ✓ \$413 Million Total Program Expenditures
  - ✓ Sample 126 Items = \$561,110
  - ✓ 16 Errors = \$245 Net Overpayments
    - ✓ Federal Portion = \$186
    - ✓ State Portion = \$59
- ✓ Projected Errors to Total Expenditures = **\$20.5 Million**

9

## State Auditor's Update

### Single Audit – Findings Presentation

---



- ✓ **Finding 2014-043**
- ✓ Dept. Processed 127,000 Payments
  - ✓ \$44 Million Total Program Expenditures
  - ✓ Sample 100 Items = \$??
  - ✓ 32 Errors = \$4,557 Net Overpayments
    - ✓ Federal Portion = \$3,586
    - ✓ State Portion = \$971

10

## State Auditor's Update

### Single Audit – Findings Presentation

---



- ✓ **Finding 2014-043 (FY 2015)**
- ✓ Dept. Processed 127,000 Payments
  - ✓ \$44 Million Total Program Expenditures
  - ✓ Sample 100 Items = \$??
  - ✓ 32 Errors = \$4,557 Net Overpayments
    - ✓ Federal Portion = \$3,586
    - ✓ State Portion = \$971
- ✓ Projected Errors to Total Expenditures = \$??

11

## State Auditor's Update

### Single Audit – Findings Presentation

---



- ✓ **What the Feds Want to Know?**
- ✓ **Questioned Costs  $\geq$  \$10,000**

12

**State Auditor's Update  
Single Audit**

---



**Sampling**

13

**State Auditor's Update  
Single Audit - Sampling**

---



**The selection and evaluation of less than 100% of a group of items in order to draw a conclusion about the entire group (population) as a whole.**

14

**State Auditor's Update  
Single Audit - Sampling**

---



**Sampling Approach -  
Statistical vs Nonstatistical**

15

**State Auditor's Update  
Single Audit - Sampling**

---



**Sampling Approach – Statistical**

**Important – Completeness of  
Population (no matter the  
approach)**

**Leveraging**

16



**State Auditor's Update  
Single Audit**

---



**Subrecipient Monitoring**

17

**State Auditor's Update  
Single Audit – Subrecipient Monitoring**

---



**An Objective of the Audit –  
Ensure Agencies are Monitoring  
the Subrecipient's  
Administration of Federal Grants**

18

**State Auditor's Update**  
**Single Audit – Subrecipient Monitoring**

---



**Assess Subrecipient Monitoring  
Plan....**

19

**State Auditor's Update**  
**Single Audit - Subrecipient Monitoring**

---



- ✓ Agency Monitoring Plans Not Followed
- ✓ Monitoring Visits Not Documented
- ✓ No Procedures to Ensure Monitoring Reports Reviewed/Results Communicated
- ✓ Monitoring Reports Not Viewed Timely
- ✓ Not All Monitoring Procedures Completed
- ✓ Corrective Actions Not Required

20

## State Auditor's Update Affects of Super Circular

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- ✓ Increase in Audit Threshold – No Affect
- ✓ Change in Risk-Based Approach
  - ✓ Type A/Type B Threshold
  - ✓ Criteria For Determining Type A as Low-Risk
  - ✓ Criteria for Choosing Type B Programs

21

## State Auditor's Update Affects of Super Circular (cont'd)

---



- ✓ Change in % of Coverage
- ✓ Increase in Threshold for Reporting Questioned Costs

22

## State Auditor's Update Agency Audits

---



- ✓ Users of NC Audited Financial Statements
- ✓ Legislative Request
- ✓ Financial Statements/More Detail/Audited

23

## State Auditor's Update Agency Audits

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- ✓ Agencies Requested
  - ✓ Department of Health and Human Services
  - ✓ Department of Public Instruction
  - ✓ Department of Public Safety
  - ✓ Department of Revenue
  - ✓ Department of the Treasurer
  - ✓ Department of Transportation

24

## State Auditor's Update Agency Audits

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### ✓ Results:

- ✓ Department of Health and Human Services
- ✓ Department of Public Instruction

25

## State Auditor's Update Medicaid Audit

---



- ✓ Benefit Programs
- ✓ State Administered Programs
- ✓ Eligibility Determined at County DSS
- ✓ Audit of Medicaid Eligibility Determination

26

## State Auditor's Update Medicaid Audit

---



- ✓ 10 Counties
- ✓ Rural/Urban
- ✓ Large/Small
- ✓ Internal Controls/Not

27

## State Auditor's Update Medicaid Audit

---



- ✓ Statistical Sample Approach
- ✓ 90% Confidence
- ✓ Can't Project Statewide
- ✓ Can Provide Useful Conclusions

28

## State Auditor's Update Affects of Super Circular

---



- ✓ Control Environment Finding
  - ✓ Repeat Findings
- ✓ Super Circular "REQUIRES" Designation of Repeat Findings

29

## State Auditor's Update State Controller's Financial Conference

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Questions?



30

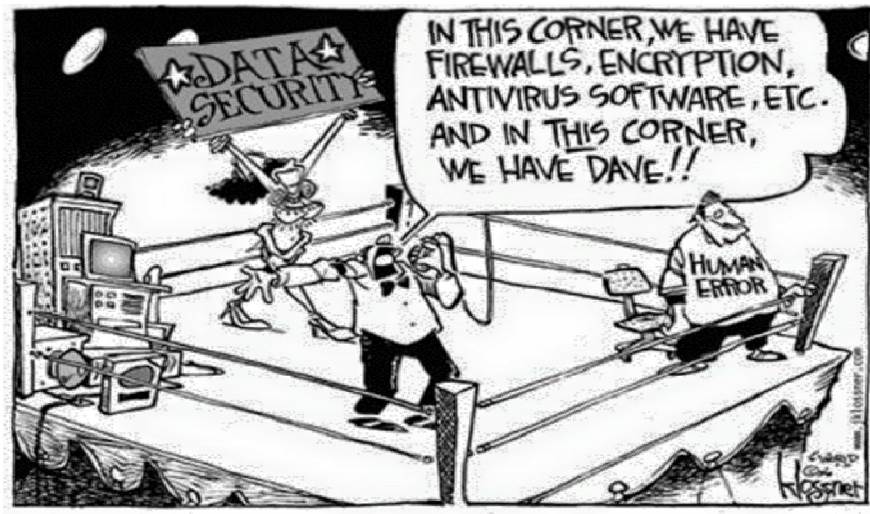


*ARE YOU THE NEXT CYBER WARRIOR?*

*Maria S. Thompson  
State Chief Risk/Security Officer*



*Which Side Are You On?*





## Cyber Professionals Deficiency Statistics

- Cybersecurity job postings grew 74% from 2007 to 2013. Twice the growth of any IT jobs.
- U.S. employers posted 50,000 jobs requesting CISSP credentials in 2013, a year in which the population of CISSP holders numbered 60,000
- Research findings from Frost & Sullivan stated the labor gap in IT security could grow to as much as 1.5 million in five years. "The demand for the (cybersecurity) workforce is expected to rise to 6 million (globally) by 2019."
- "It's probably 10- to 12-times harder to find cybersecurity professionals than it is to find general IT professionals,"
- Trendmicro estimates that growth of cybersecurity positions is currently increasing at a rate 12 times faster than the rest of the U.S. job market



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## What Employers Are Looking For

### Knowledge, Skills and Abilities:

- On the strategic side, "you need people who can do more than configure rules and policies and 'keep the bad guys out.' You need data scientists. You need people with different backgrounds. You need people who can look at large quantities of data and can analyze trends and are good at spotting anomalous behaviors in those data patterns,"
- Experts agree more education and training is critical to increase the candidate ranks. "One of industry biggest concerns, or criticisms, relative to security talent that's coming out of colleges and universities is that ... **the academic learning is terrific, but you really need hands-on experience in cyber security environment,**"
- To do cybersecurity well you need two kinds of qualities that we don't know how to train for," Borg said. "We don't know how to train them to move across many disciplines, many different technical areas. We also don't know how to train people to think like hackers or think outside the box."



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## What Employers Are Looking For

### Training & Certification:

Certifications drive starting salaries even higher. In the security category, having a Certified Information Systems Security Professional (CISSP) certification adds 6%, on average, to IT salaries, while Check Point Firewall administration skills are worth a 7% bump, Cisco network administration skills add 9%, and Linux/Unix administration skills add 9% to starting pay.

Certifications are not the end all. A recruiter can find someone to fill a role based on the required certification, however, that certification does not automatically translate to deep security understanding

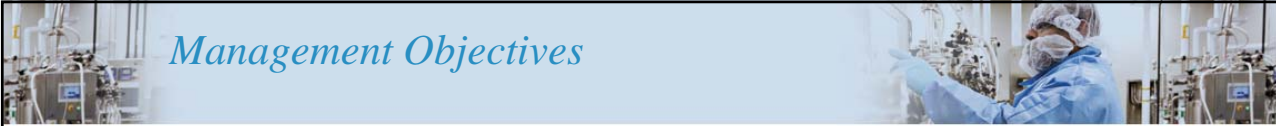


## What Employers Are Saying

### Knowledge, Skills and Abilities:


- There's no silver bullet. Training and education must be relevant and sustainable
- **Attract, train, and retain talented cybersecurity professionals** – “Even the best cybersecurity tools in the world require talented people who know how to use them.” (OPM Breach report - Recommendations for Addressing IT Security and Data Protection Vulnerabilities)
- "I think that the lack of security professionals and the shortage of supply is one of the greatest threats facing the industry right now,"
- Security managers reported significant obstacles in implementing desired security projects due to lack of staff expertise (34.5%) and inadequate staffing (26.4%).





## Management Objectives

- **Certify the Workforce – INVEST IN YOUR PERSONNEL!!!**
  - Improved Cybersecurity posture
  - Provide a foundation of a professional workforce
  - Mechanism to “raise the bar” on cyber skills
- **Manage the Workforce**
  - Ability to place trained/capable personnel in cyber related jobs
  - Develop a career path – workforce management plan
- **Sustain the Workforce**
  - Elevate priority of Cybersecurity for training dollars
  - Enable personnel to hone Cybersecurity skills, keep current with latest technology, threats and vulnerabilities, tools and techniques
  - Create a pipeline for new talent (e.g. K-12 outreach)
- **Extend the Discipline**
  - Management at all levels who understand the impact of cybersecurity on mission accomplishment
  - Cybersecurity literacy for other critical workforces (e.g., procurement, HR etc.)



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## Training Opportunities

- NIST National Initiative for Cybersecurity Education (NICE)
  - NICE is a public-private partnership between government, academia, and the private sector
  - National initiative to address cybersecurity education, training, and workforce development
  - Cyber Education Map which plots schools offering cybersecurity programs across the country. Another way to both expand and improve the cybersecurity workforce is to bring a wide range of students into the educational pipeline that feeds industry and government needs
  - <http://www.cybereducationmap.org/map>
- Cybrary
  - Provides comprehensive IT and cyber security training options for underserved and disadvantaged people seeking to break into cyber security or move ahead in their current jobs
  - no-cost cyber security massive open online course (MOOC) provider
- Virtual Training Environments
  - <https://fedvte.usalearning.gov/>
- Vendor training and certification programs
- Service members have a myriad of opportunities from service schools to live cyber ranges to hone their skills



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# NIST Framework

The NICE Cybersecurity Workforce Framework outlines 31 functional work specialties within seven Categories:

- Developed in collaboration with subject matter experts from government, non-profits, academia, and the private sector.
- Foundation for increasing the size and capability of the US cybersecurity workforce.
- National resource for employers, educators, trainers, and policy makers, providing a common cybersecurity lexicon.

SECURELY PROVISION

OPERATE AND MAINTAIN

PROTECT AND DEFEND

ANALYZE

OVERSIGHT AND DEVELOPMENT

INVESTIGATE

COLLECT AND OPERATE

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# NIST Cybersecurity Framework

**THE NATIONAL CYBERSECURITY WORKFORCE FRAMEWORK**

**SECURELY PROVISION**  
Specialty areas responsible for conceptualizing, designing, and building secure information technology (IT) systems, i.e., responsible for some aspect of systems development.

**Information Assurance (IA) Compliance**  
Oversees, evaluates, and supports the documentation, validation, and accreditation processes necessary to assure that new information technology (IT) systems meet the organization's information assurance (IA) and security requirements. Ensures appropriate treatment of risk, compliance, and assurance from internal and external perspectives.

**Software Assurance and Security Engineering**  
Develops and writes/codes new (or modifies existing) computer applications, software, or specialized utility programs following software assurance best practices.

**Systems Security Architecture**  
Develops system concepts and works on the capabilities phases of the systems development lifecycle; translates technology and environmental conditions (e.g., law and regulation) into system and security designs and processes.

**Technology Research and Development**  
Conducts technology assessment and integrates processes; provides and supports a prototype capability and/or evaluates its utility.

**Systems Requirements Planning**  
Consults with customers to gather and evaluate functional requirements and translates these requirements into technical solutions. Provides guidance to customers about applicability of information systems to meet business needs.

**Test and Evaluation**  
Develops and conducts tests of systems to evaluate compliance with specifications and requirements by applying principles and methods for cost-effective planning, evaluating, verifying, and validating of technical, functional, and performance characteristics (including interoperability) of systems or elements of systems incorporating information technology (IT).

**Systems Development**  
Works on the development phases of the systems development lifecycle.


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# NIST Cybersecurity Framework

**SECURELY PROVISION**
**INFORMATION ASSURANCE (IA) COMPLIANCE**

Oversees, evaluates, and supports the documentation, validation, and accreditation processes necessary to assure that new information technology (IT) systems meet the organization's information assurance (IA) and security requirements. Ensures appropriate treatment of risk, compliance, and assurance from internal and external perspectives.

TASK ID	KSA	Statement
537		Develop methods to monitor and measure risk, compliance, and assurance efforts
548		Develop specifications to ensure risk, compliance, and assurance efforts conform with security, resilience, and dependability requirements at the software application, system, and network environment level
566		Draft statements of preliminary or residual security risks for system operation
691		Maintain information systems assurance and accreditation materials
696		Manage and approve Accreditation Packages (e.g., International Organization for Standardization/International Electrotechnical Commission [ISO/IEC] 15026-2)
710		Monitor and evaluate a system's compliance with information technology (IT) security, resilience, and dependability requirements
772		Perform validation steps, comparing actual results with expected results and analyze the differences to identify impact and risks
775		Plan and conduct security authorization reviews and assurance case development for initial installation of software applications, systems, and networks
798		Provide an accurate technical evaluation of the software application, system, or network, documenting the security posture, capabilities, and vulnerabilities against relevant information assurance (IA) compliances
827		Recommend new or revised security, resilience, and dependability measures based on the results of reviews
836		Review authorization and assurance documents to confirm that the level of risk is within acceptable limits for each software application, system, and network
878		Verify that application software/network/system security postures are implemented as stated, document deviations, and recommend required actions to correct those deviations
879		Verify that the software application/network/system accreditation and assurance documentation is current
936		Develop security compliance processes and/or audits for external services (e.g., cloud service providers, data centers)
937		Inspect continuous monitoring results to confirm that the level of risk is within acceptable limits for the software application, network, or system



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# NIST Cybersecurity Framework

**SECURELY PROVISION**
**INFORMATION ASSURANCE (IA) COMPLIANCE**

Oversees, evaluates, and supports the documentation, validation, and accreditation processes necessary to assure that new information technology (IT) systems meet the organization's information assurance (IA) and security requirements. Ensures appropriate treatment of risk, compliance, and assurance from internal and external perspectives.

TASK ID	KSA	Statement	Competency
19		Knowledge of computer network defense (CND) and vulnerability assessment tools, including open source tools, and their capabilities	Computer Network Defense
58		Knowledge of known vulnerabilities from alerts, advisories, errata, and bulletins	Information Systems/Network Security
63		Knowledge of information assurance (IA) principles and organizational requirements that are relevant to confidentiality, integrity, availability, authentication, and non-repudiation	Information Assurance
69		Knowledge of Risk Management Framework (RMF) requirements	Information Systems Security Certification
77		Knowledge of current industry methods for evaluating, implementing, and disseminating information technology (IT) security assessment, monitoring, detection, and remediation tools and procedures, utilizing standards-based concepts and capabilities	Information Systems/Network Security
88		Knowledge of new and emerging information technology (IT) and information security technologies	Technology Awareness
121		Knowledge of structured analysis principles and methods	Logical Systems Design
126		Knowledge of systems diagnostic tools and fault identification techniques	Systems Testing and Evaluation
143		Knowledge of the organization's enterprise information technology (IT) goals and objectives	Enterprise Architecture
183		Skill in determining how a security system should work (including its resilience and dependability capabilities) and how changes in conditions, operations, or the environment will affect these outcomes	Information Assurance
203		Skill in identifying measures or indicators of system performance and the actions needed to improve or correct performance relative to the goals of the system	Information Technology Performance Assessment
942		Knowledge of the organization's core business/mission processes	Organizational Awareness



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## Cyber Workforce Goals

- Identify, classify our Cyber Workforce
  - Identify key stakeholders
  - Top down support
  - Obtain budget
  - Identify shadow IT elements
- Conduct Knowledge, Skills and Abilities Assessment
  - Identify training requirements
- Leverage our NC schools systems for talent
  - Engage early, recruit early

**MISSION: Recruit, Train and Retain**



## Questions?

Contact:  
Maria.S.Thompson@nc.gov

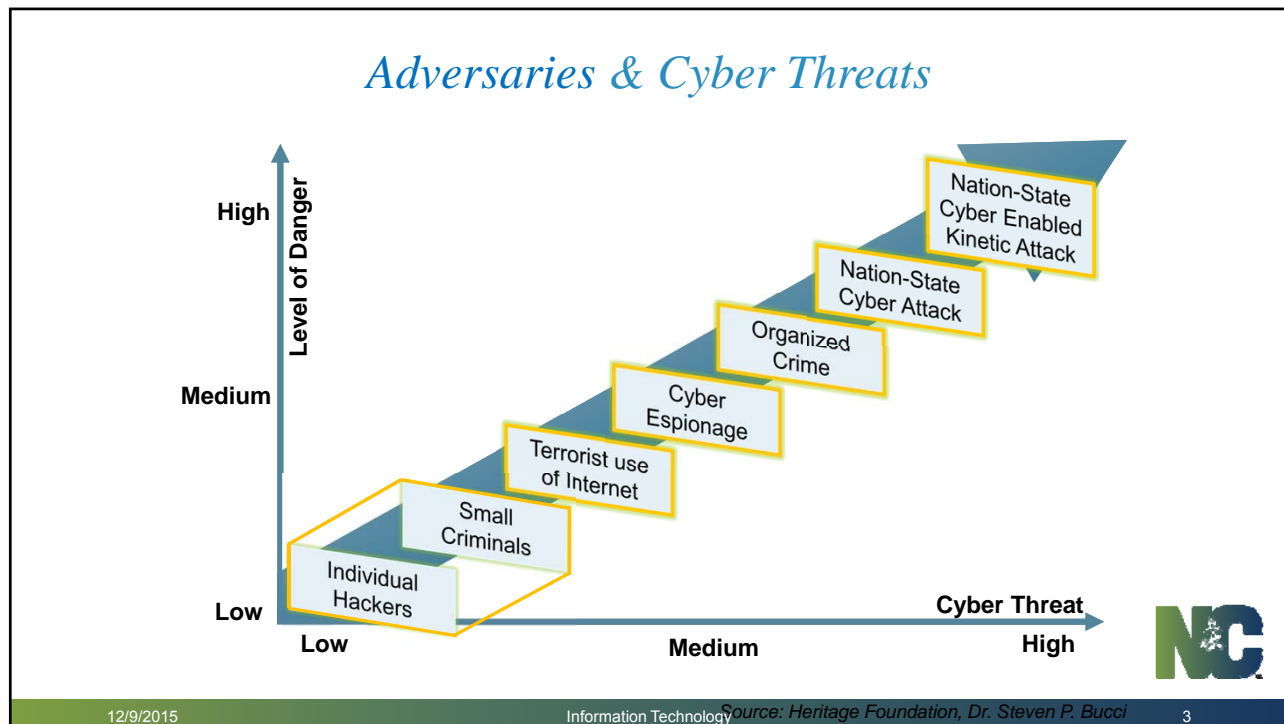




## *Topics*

- Threats & Trends
  - Adversaries
    - Have we seen them?
      - Denial of Service Attacks
      - Web Defacements
      - System Compromises
      - Ransomware
  - Trends
    - More Flash and Java Exploits
    - More devices = bigger target pool (IoT)





### *Insider Uber Geek*

- Just because you can, doesn't mean you should...
  - Set up a web server on a desktop/laptop system
  - Anyone in the network could link to the host over port 80
  - Default page was a series of bookmarks in html
  - Some linked to administrative interfaces on departmental servers and had username and password for the account login
  - About 30% of the links were not work related





## Insider Uber Geek

The screenshot shows a web browser window with a 'HOME PAGE' title. The page is filled with numerous links organized into several columns. The columns include:

- E-Mail Links:** Links to various email addresses and services.
- Other Links:** Links to external websites and resources.
- Web Links:** Links to specific web pages and documents.
- News Links:** Links to news articles and press releases.
- New Public Education:** Links related to public education in North Carolina.
- News/Weather:** Links to news and weather updates.

The browser's address bar shows the URL: [www.dca.nc.gov/insiderupdates/ticketsummary2011.aspx](http://www.dca.nc.gov/insiderupdates/ticketsummary2011.aspx). The browser's address bar also shows 'port 80' and 'mental'.



## Web Defacements



**Example:**  
 North Carolina State University

- Targets of Opportunity
  - Wordpress Plugin
- Political Messages
- MexicanHackers is a single Muslim Mexican hacker voicing support of ISIL/ISIS and distrust of current Mexican government leadership.



## Web Defacements



**Example:**  
Winston-Salem State University

- Targets of Opportunity
- Political Messages
- AnonGhost – currently has a campaign called #OpChapelHill targeting college web sites in retaliation for the shootings of three Muslim students in February.



## Web Defacements



**Example:**  
readync.org

- Targets of Opportunity
  - Exposed Upload Script
- Political Messages
- ToxicDZ (TeamDZ) Algerian Hackers – Stopped short of direct support of ISIL/ISIS.



## Web Defacements



**Example:**  
readync.org

- Targets of Opportunity
  - Exposed Upload Script
- Political Messages
- Hp-Hack Saudi Arabian hackers.



## Secure Coding (1)

- Many applications within State government are home grown or custom from a vendor
  - Problem:
    - We don't include language in contracts to hold the vendors accountable or require them to adhere to secure coding best practices
    - We leverage non-technical personnel with an interest and limited skill set to develop applications



## *Secure Coding (2)*

- Non-Technical Personnel:
  - Not aware of the security threat
  - Not trained to program securely
    - Include variables and sensitive data in URLs (passwords)
    - Don't understand the need to examine and validate input from users and other systems



## *Secure Coding (3)*

- Need to validate input is what it purports to be
  - Png upload could really be a webshell php/asp script
  - Field inputs do not contain codes or instructions that might be interpreted by back end systems to provide information on the server design, capabilities, or protected database contents (SQLi)



## Secure Coding (4)

- Check inputs meet the expected variable type and size limits and discard or sanitize avoid buffer overflows which might return memory contents or result in execution of code inserted in the excess data



## Web Server Data Compromise

Notification: Post to PasteBin service - Found by AP reporter who contacted PIO

```

-----
|KELVINSECURITY|
-----
--- contact:https://www.facebook.com/pages/KelvinSecurity/1470285456587684
author: kelvinsecurity

----- больш
-----
Што Kelvinsecurity?

Kelvinsecurity з'яўляецца хакер твар шукае збору інфармацыі вялікіх людзей па ўсім свеце, падлучаных
да сеткі, і ўразлівых да гэтых платформах.

-----
North Carolina State Government Is Hacked By KelvinSecTeam
-----
TARGET:http://www.ncparks.gov/
-----
Host  User  Password
127.0.0.1  root  1618133527927dee
localhost  losborne  4a1d5c113129f682

```



# Web Server Data Compromise

Attempt to evade IDS by obfuscating the SQL Injection commands used...

Obfuscated:

```
family=999999.9%27%20union%20all%20select%200x31303235343830303536%2C%28select%20concat%280x27%2C0x7e%2Cunhex%28Hex%28cast%28pcard_users.last_name%20as%20char%29%29%29%2C0x5e%2Cunhex%28Hex%28cast%28pcard_users.pcard_numname%20as%20char%29%29%29%2C0x5e%2Cunhex%28Hex%28cast%28pcard_users.card_number%20as%20char%29%29%29%2C0x5e%2Cunhex%28Hex%28cast%28pcard_users.first_name%20as%20char%29%29%29%2C0x5e%2Cunhex%28Hex%28cast%28pcard_users.bank%20as%20char%29%29%29%2C0x5e%2Cunhex%28Hex%28cast%28pcard_users.transactions%20as%20char%29%29%29%2C0x5e%2Cunhex%28Hex%28cast%28pcard_users.location%20as%20char%29%29%29%2C0x27%2C0x7e%29%20from%20%60bdb_backup%60.pcard_users%20limit%207%2C1%29%20%2C0x31303235343830303536%2C0x31303235343830303536%20and%20%27x%27%3D%27x
```

Converted:

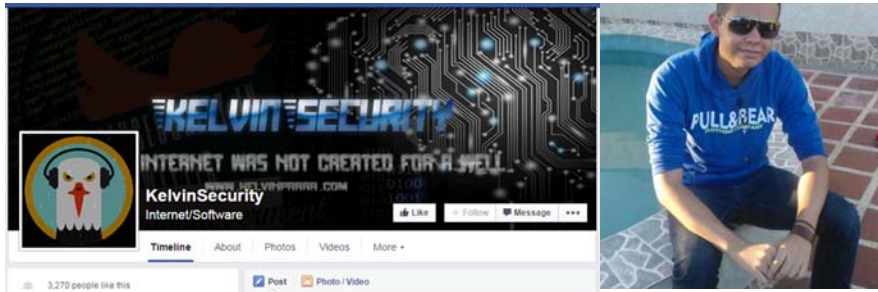
```
family=999999.9' union all select 0x31303235343830303536,(select concat(0x27,0x7e,unhex(Hex(cast(pcard_users.last_name as char))),0x5e,unhex(Hex(cast(pcard_users.pcard_numname as char))),0x5e,unhex(Hex(cast(pcard_users.card_number as char))),0x5e,unhex(Hex(cast(pcard_users.first_name as char))),0x5e,unhex(Hex(cast(pcard_users.bank as char))),0x5e,unhex(Hex(cast(pcard_users.transactions as char))),0x5e,unhex(Hex(cast(pcard_users.location as char))),0x27,0x7e) from `bdb_backup`.pcard_users limit 7,1),0x31303235343830303536,0x31303235343830303536 and 'x'='x
```



# Web Server Data Compromise

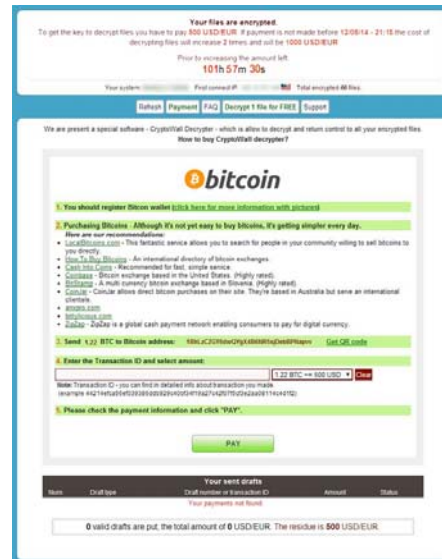
Kelvinsecurity з'яўляецца хакер твар шукае збору інфармацыі вялікіх людзей на ўсім свеце, падлучаных да сеткі, і ўразлівыя да гэтых платформах.

Kelvinsecurity hacker is a person looking for a collection of information of great people around the world connected to the network and are vulnerable to these platforms.



## Ransomware Indicators of Compromise


- System hard disk activity
- Potentially high CPU usage (Encryption)
- Increased network activity to file shares
- Inability to access files
- Presence of Notice/Instructions



## CTB Notice



# TeslaCrypt Notice



**All your important files are encrypted.**

At the moment, the cost of private key for decrypting your files is 1.5 BTC ~ = 415 USD.  
Your Bitcoin address for payment: 1LyW9wyajpsC3j9RitZDip6cDcZ7jJMG5

**PURCHASE PRIVATE KEY WITH BITCOIN**

You can also make a payment with **PaySafeCard** or **Ukash**

In case of payment with **PaySafeCard** or **Ukash** your total payment is **£ 400**

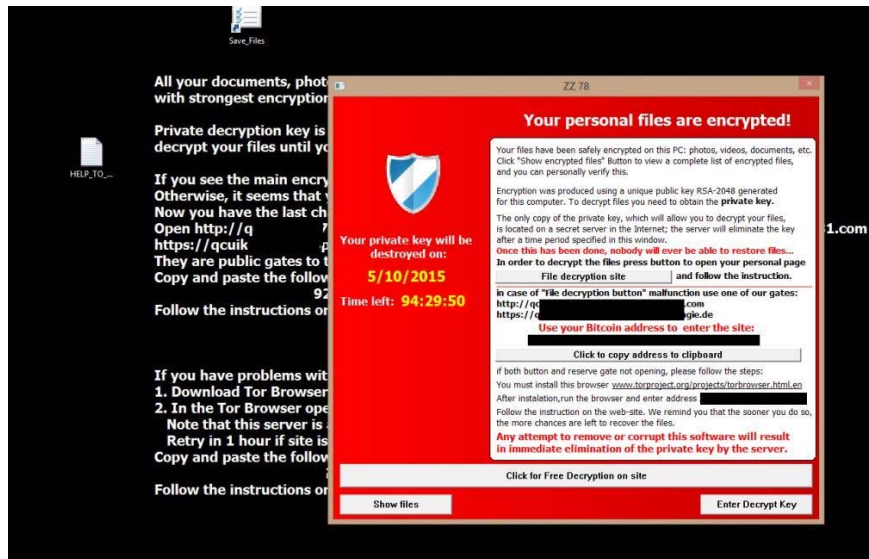
**PURCHASE PRIVATE KEY WITH PAYSAFECARD OR UKASH**

Payment verification may take up to 12 hours.

**Support**  
[Message Center](#)

**Try to decrypt your file here**  
You can test the decryption service once for FREE.

# AlphaCrypt Notice



**Your personal files are encrypted!**

Your files have been safely encrypted on this PC: photos, videos, documents, etc. Click "Show encrypted files" button to view a complete list of encrypted files, and you can personally verify this.

Encryption was produced using a unique public key RSA-2048 generated for this computer. To decrypt files you need to obtain the **private key**.

The only copy of the private key, which will allow you to decrypt your files, is located on a secret server in the Internet; the server will eliminate the key after a time period specified in this window.

**Once this has been done, nobody will ever be able to restore files...**

In order to decrypt the files press button to open your personal page

File decryption site:  and follow the instruction.

In case of "file decryption button" malfunction use one of our gates:  
[http://\[redacted\].com](http://[redacted].com)  
[https://\[redacted\].de](https://[redacted].de)

**Use your Bitcoin address to enter the site:**

Click to copy address to clipboard

If both button and reserve gate not opening, please follow the steps:  
You must install this browser [\[redacted\]](http://[redacted].org/projects/torbrowser.html)  
After installation, run the browser and enter address:   
Follow the instruction on the web-site. We remind you that the sooner you do so, the more chances are left to recover the files.

**Any attempt to remove or corrupt this software will result in immediate elimination of the private key by the server.**

Click for Free Decryption on site

Your private key will be destroyed on: **5/10/2015**  
Time left: **94:29:50**



## *Post Infection Ransom*

- Instructions
  - BitCoins or PayPal (\$200 - \$1,000)
    - Suggests Currency to BTC Conversion Services
  - The Onion Router (TOR) Network
    - TOR Hidden Payment Site
- Payment (***Not Recommended***)
  - Decryption Key will usually be provided if paid by deadline (no guarantee)
  - Decryption will take as long as encryption

## *Recovery*

- Remove Infected system from network
  - Examine user's e-mail and web browsing history for potential source of infection
  - Reimage System before bringing back on to the network
- Restore lost file share and local data from known good back up media
- Remove ransom instructions (text files) from impacted folders



## *Prevention (Users)*

- User Awareness
  - Don't Keep OR Back up important files on local system
  - Don't follow links or open attachments in unexpected or suspicious e-mails
    - Report suspicious e-mails to [report.spam@nc.gov](mailto:report.spam@nc.gov) so they can be filtered
  - Web browsing should be work related
  - Suggestion: Do not allow checking of personal e-mail from State systems



## *Prevention (System Controls)*

- End User Accounts should not be administrators on their local system
- Implement Microsoft AppLocker GPO
  - Prevents execution of files from the c:/Users/<user>/AppData/ folder and subs
- Application Whitelisting/SW Restriction
- Utilize WCF and DNS FW
- Patch – OS to plugins (Flash, Java)
- Allow/Install Pop-up and Ad Blockers



## State Perspective

- Ransomware infections are a reportable incident to the State CIO
- Engage DIT AD team for GPO support
- Follow-up with a report to [www.ic3.gov](http://www.ic3.gov)
  - Provide “Crypto\_\_\_\_\_” and “ransomware” as keywords in report
  - Builds victim list for FBI to use if suspects are indicted for building, distributing and receiving payments associated with the ransomware



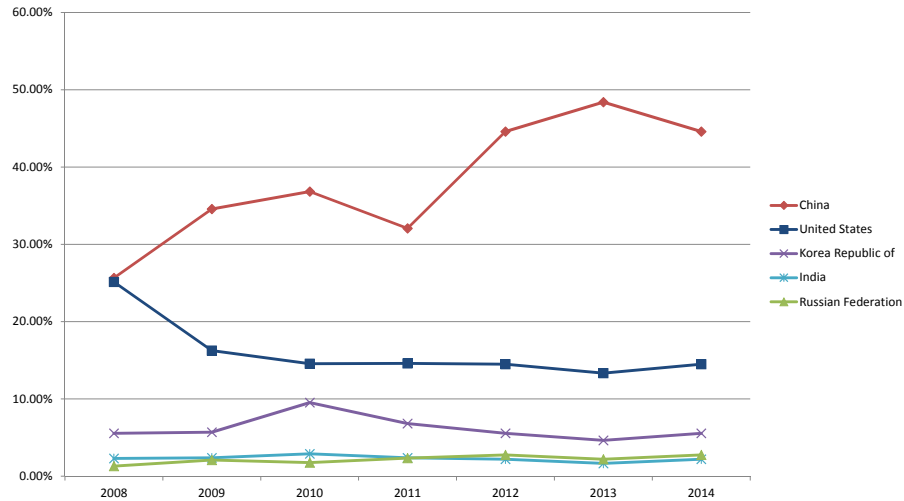
## Secure SHell - SSH in the Matrix

```

1 /tcp      nmap      hosts2-ns      [mobile]
0
1 Starting nmap V. 2.54BETA25
1 Insufficient responses for TCP sequencing (3), OS detection may be less
3 accurate
3 Interesting ports on 10.2.2.2:
3 (The 1539 ports scanned but not shown below are in state: closed)
4: Port      State      Service
4: 22/tcp    open      ssh
1:
1 No exact OS matches for host
8:
8: Nmap run completed -- 1 IP address (1 host up) scanned
8: # sshnuke 10.2.2.2 -rootpw="210N0101"
4: Connecting to 10.2.2.2:ssh ... successful.
0: Attempting to exploit SSHv1 CRC32 ... successful.
0: Resetting root password to "210N0101".
P: System open: Access Level <9>
P # ssh 10.2.2.2 -l root
root@10.2.2.2's password:
0:
0: [root@10.2.2.2 ~]# df -cntrlol > disable grid nodes 21 - 48
  
```



### SSH Attempted Intrusions (Targets)

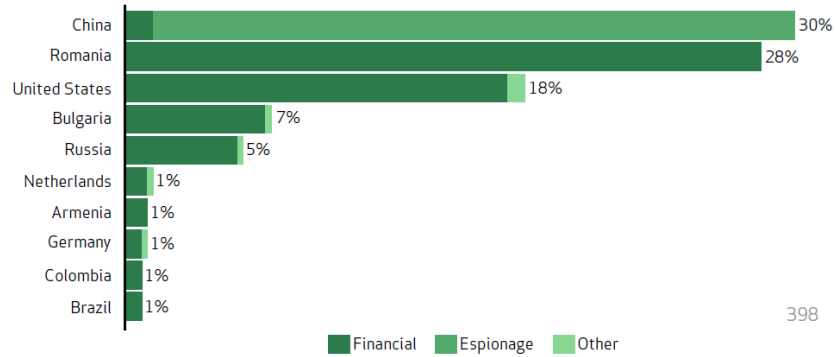


### SSH Attempted Intrusions (Targets)

Country	2008	2009	2010	2011	2012	2013	2014	Avg
China	25.65%	34.57%	36.82%	32.06%	44.60%	48.40%	44.60%	38.10%
United States	25.14%	16.26%	14.56%	14.60%	14.48%	13.34%	14.48%	16.12%
Korea Republic of	5.56%	5.70%	9.52%	6.82%	5.54%	4.64%	5.54%	6.19%
Unknown	0.02%	2.43%	1.35%	6.06%	4.10%	1.96%	4.10%	2.86%
India	2.30%	2.38%	2.90%	2.39%	2.20%	1.65%	2.20%	2.29%
Russian Federation	1.32%	2.09%	1.76%	2.35%	2.75%	2.20%	2.75%	2.17%
Germany	2.30%	1.68%	1.84%	3.28%	1.83%	2.29%	1.83%	2.15%
Brazil	3.10%	2.51%	2.45%	1.94%	1.61%	1.65%	1.61%	2.13%
Taiwan	2.34%	2.57%	1.78%	1.59%	1.11%	1.05%	1.11%	1.65%
United Kingdom	1.77%	1.28%	2.05%	1.88%	1.49%	1.57%	1.49%	1.65%
France	1.91%	1.87%	1.25%	2.42%	1.36%	0.89%	1.36%	1.58%
Japan	3.52%	1.66%	0.96%	0.70%	0.88%	0.99%	0.88%	1.37%
Canada	1.30%	1.66%	0.82%	2.89%	0.78%	1.09%	0.78%	1.33%
Netherlands	1.14%	1.20%	0.88%	1.90%	1.37%	0.91%	1.37%	1.25%
Turkey	0.37%	0.94%	1.34%	1.18%	1.29%	2.34%	1.29%	1.25%



## Verizon External Actor Origination



## In the News



**Conspiring to Commit Computer Fraud; Accessing a Computer Without Authorization for the Purpose of Commercial Advantage and Private Financial Gain; Damaging Computers Through the Transmission of Code and Commands; Aggravated Identity Theft; Economic Espionage; Theft of Trade Secrets**



Huang Zhenyu



Wen Xinyu



Sun Kailiang



Gu Chunhui



Wang Dong



## In the News

### THE | DIPLOMAT

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CHINA POWER

#### China (Finally) Admits to Hacking

An updated military document for the first time admits that the Chinese government sponsors offensive cyber units.

By Shannon Tiezzi  
March 18, 2015

1.2k Shares  
48 Comments



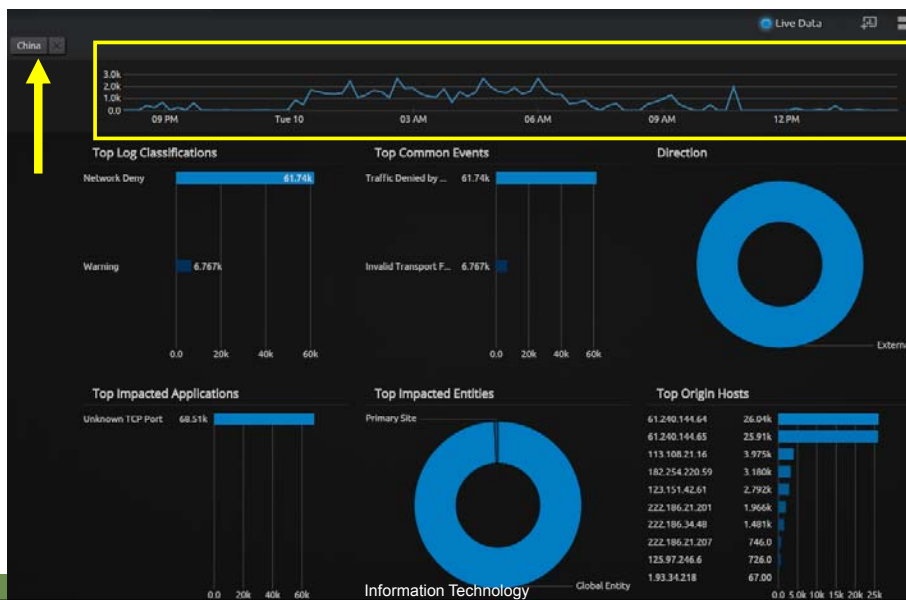
Image Credit: China keyboard image via Shutterstock

China's military has finally pulled back the curtain on its cyber strategy, admitting for the first time that it (like countries around the world) has cyber units set up not only for defense, but for attack.

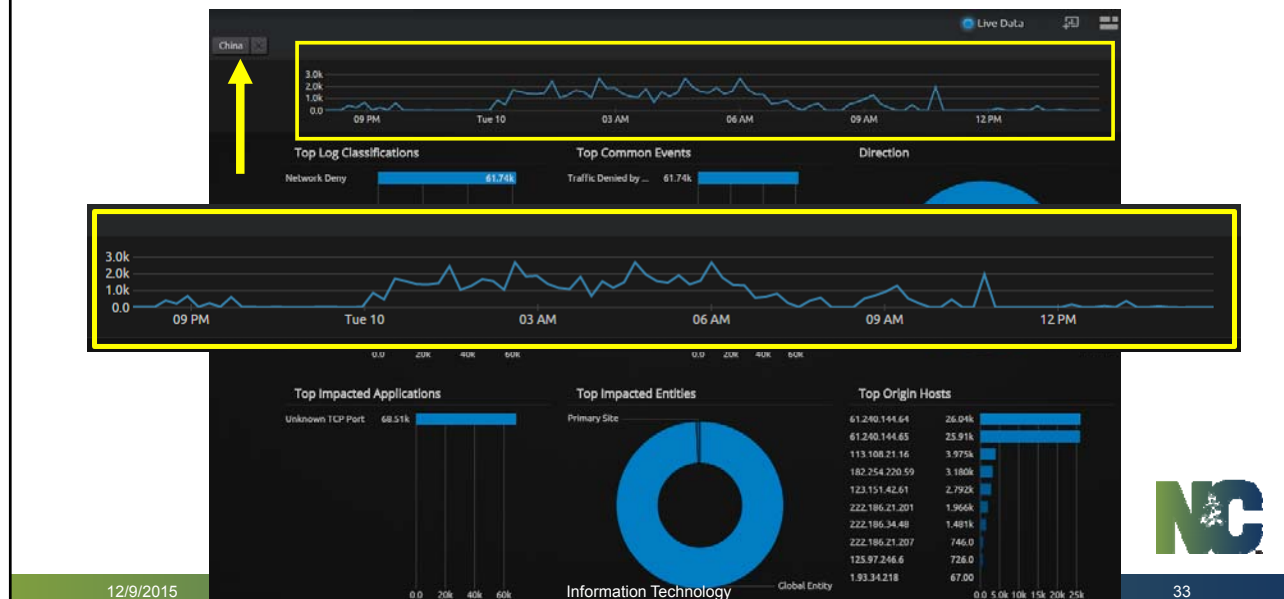
Officially, China's line has always been that its government does not sponsor any form of hacking. Those denials



## Hacking 9 – 5 Beijing Time



## Hacking 9 – 5 Beijing Time



## Advanced Persistent Threats (APT)

### TTP's and Cyber Kill Chain

1. Reconnaissance
2. Weaponize
3. Delivery
4. Exploit
5. Installation
6. Command & Control (C2)
7. Actions on Objectives



## APT Spearphish Case Study Recap

- **Reconnaissance** – Identify potential group that has or will have access to information desired – find valid contents for payload. Used Staff Directory from Rail Division Web Site (12/5/2013 - China [1.202.124.195](http://1.202.124.195)) [www.bytrain.org/redbarinfo/staff/Default.html](http://www.bytrain.org/redbarinfo/staff/Default.html)
- **Weaponize** – Add exploit code to Word Document that contains valid staff directory - Exploit MS12-027 (April 2012)
- **Delivery** – Spoof e-mail address of [Director@ncdot.gov](mailto:Director@ncdot.gov) and send e-mail with links to malicious document to people listed in staff directory. (12/10/2013)
- **Exploit** – Have recipients download and open malicious file.
- **Installation** – Exploit code compromises system.
- **Command & Control (C2)** – Systems phone home to adversary.
- **Actions on Objectives** – Adversary installs additional malicious software and begins to move laterally in the network collecting and exfiltrating desired information.



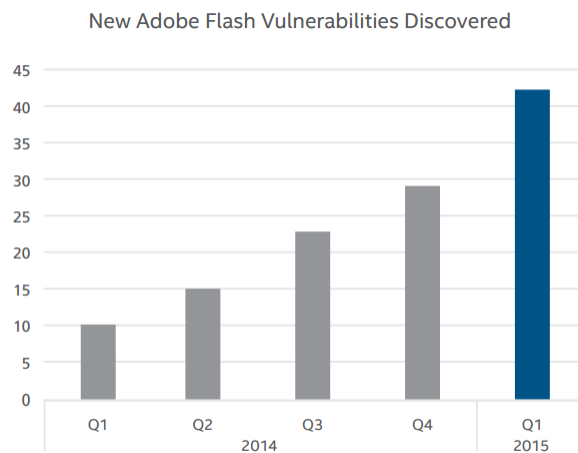
12/9/2015

Information Technology

35

## Trends – Flash Exploits

In the first quarter, 42 new Flash vulnerabilities were found, an increase of 50% from the 28 Flash vulnerabilities found in the fourth quarter of 2014. It is the highest-ever number of Flash vulnerabilities reported in a quarter.



Source: National Vulnerability Database.



12/9/2015

Information Technology

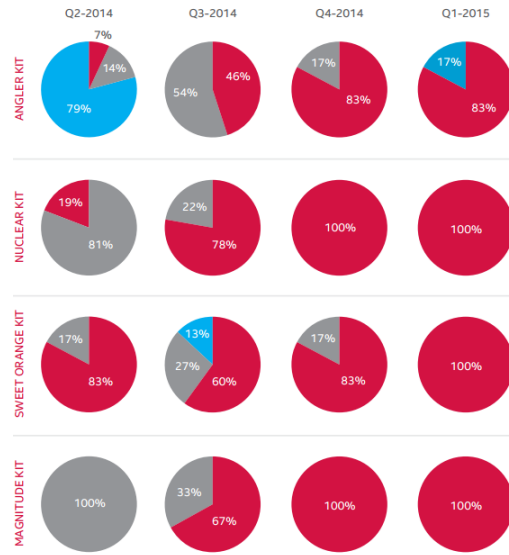
Source: McAfee Labs

36



## Exploit Kits Targeted Vulns

- **Flash (swf)**
- **Java (jar)**
- **Silverlight**

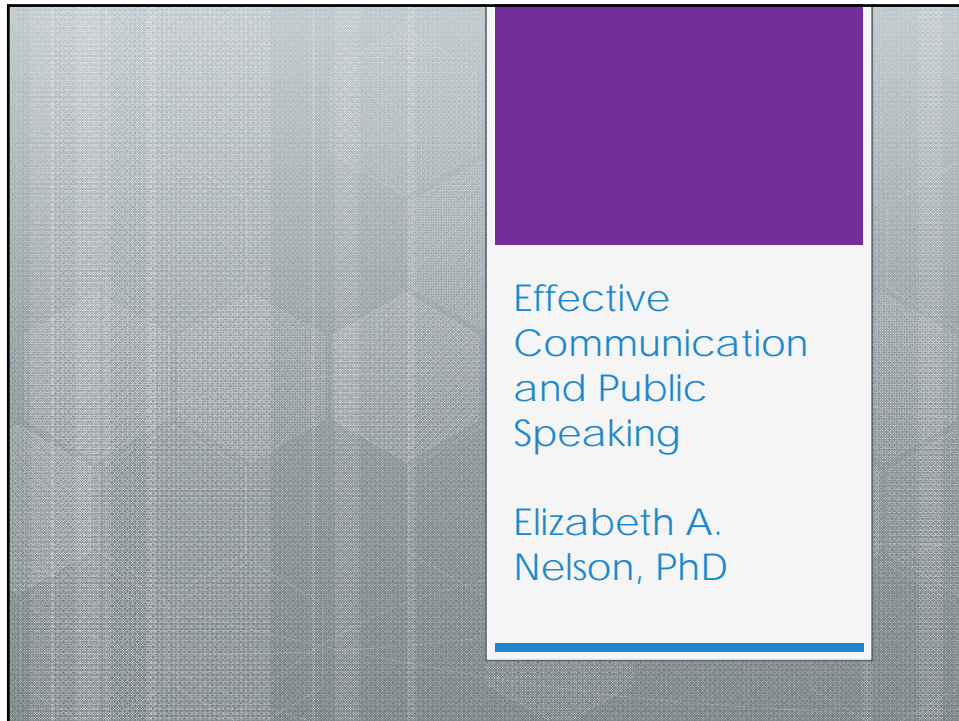


## Questions?



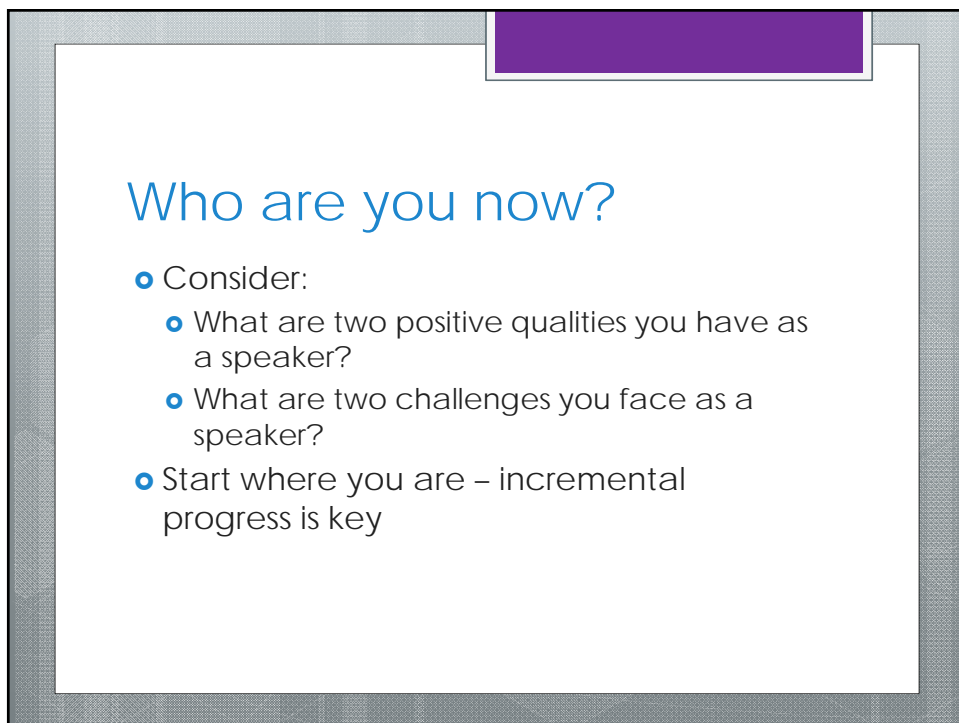
**STOP | THINK | CONNECT™**





Effective  
Communication  
and Public  
Speaking

Elizabeth A.  
Nelson, PhD



## Who are you now?

- Consider:
  - What are two positive qualities you have as a speaker?
  - What are two challenges you face as a speaker?
- Start where you are – incremental progress is key

## Success Strategy

- Create a speaking success file. Record your strengths and challenges. The next time you speak make a plan to maximize the positives and address the challenges. Record your outcomes. Continue to do this until you have mastered your challenges. Then, choose two new positive and two new challenges to strategize.

## Before any speaking occasion, consider:

- Your role
- Your goal
- The speaking context
- The audience
- The relationship between speaker and audience
- The content of your message

## Effective speaking is ...

- Simple
- Well-organized
- Appropriately formal or informal
- Reflexive
- Narrative
- Appropriately humorous

## Effective public speakers

- Ethos
- Identification/(dis)identification
- Rapport
- Inclusivity
  - Totalizing statements
  - Identity of the speaker
  - Identity/ies of the audience

## Success Strategy

- Start analyzing your written messages for these same qualities. When possible, edit your writing to maximize these qualities.
  - Add in brief ethos and/or (dis)identification statements
  - Can you be more narrative and informal to build rapport? Is this a time for more formality?
  - For special assistance with bias free language, go here:
    - <http://www.unh.edu/inclusive/bias-free-language-guide>
- Include these exercise in your success journal to offer templates and remind you of successes!

## Organization & Audience

- Introductions/purpose
  - Connect with your audience
- Order of information
  - Balance
  - Coherence
  - Completeness
  - Why your audience should care
- Conclusion/reminder of purpose
  - Connect with your audience again

## Language

- Transparency in language
- Concrete words
- Active voice
  - <https://owl.english.purdue.edu/owl/resource/53/9/05/>
  - Making the agent the subject who does: I will call you
  - Reverse – making the agent the object to whom or by whom something is done: You will receive a call from me
- Limiting or defining jargon
- Limiting or eliminating verbal fillers

## Success Strategy

- For every message you plan to deliver, write an outline or a full text. Spot check your message for organization, audience centeredness, and effective language. Make adjustments to ensure maximum power in every message.

## Verbal/vocal presentation

- Volume
- Rate (120 and 150 wpm)
- Pauses
- Articulation/Enunciation/Pronunciation
- Inflection
- Attitude
  
- What are your vocal communication strengths? challenges?

## Nonverbal communication

- Appearance
- Stance/Movement/Gestures
- Eye contact/Facial expression
- Emotion
- Use of notes
  
- What are your nonverbal communication strengths? challenges?

## Success Strategy

- Find a speaking buddy. Using messages you have to deliver, or other written messages, practice your delivery in front of each other. Critique each other on successes and opportunities (most effective when written). Meet regularly to form a speaking development partnership.
- Tape yourself! Using video and audio, record and analyze yourself. Perform self-critique as directed above. Watch yourself grow!



## 2015 OSC Financial Conference December 15, 2015

### Attendees by Last Name (371)

Jennifer Acton-UNC at Chapel Hill  
Bennie Aiken-Department of Insurance  
Robbie Alford-Office of the State Controller  
Robert Allen-NC School of Science and Mathematics  
Lisa Allnutt-Department of State Treasurer  
Stephanie Alsay-Department of Justice  
Gregory Alvord-Department of Health and Human Services  
Ann Anderson-Office of the State Controller  
Brandy Andrews-NC Community College System  
Lewis Andrews-Department of State Treasurer  
Lamees Asad-UNC at Chapel Hill  
Kristina Autio-Office of State Auditor  
Khalid Awan-Department of Public Safety  
Angie Ayscue-Department of Transportation  
Debra D Bailey-East Carolina University  
Lien Bailey-UNC at Pembroke  
Bruce Baird-Office of State Auditor  
Markisha Baker-Office of the State Controller  
Matthew Banko-Alamance Community College  
Yolanda Banks-Deaver-NC Central University  
John Barfield-Office of the State Controller  
Suzanne Beasley-Department of Health and Human Services  
John Belk-Office of Information Technology Services  
Joseph Belnak-NC Education Lottery  
Randy Bennett-UNC at Greensboro  
Jeannie Betts-Department of Health and Human Services  
Michelle Blackwelder-Department of Health and Human Services  
Eric Blaize-Department of Secretary of the State  
David Blakemore-UNC at Chapel Hill  
Leslie Blankenship-Isothermal Community College  
Judy Blount-Department of Public Instruction  
Joyce Boni-UNC General Administration  
Floyd Bowen Jr-Department of Health and Human Services  
Dee Bowling-East Carolina University  
Amy Bowman-Office of State Budget and Management  
Kevin Brackett-Department of Health and Human Services  
Jennifer Brady-NC State University  
Bryan Brannon-Department of Administration  
Jack Brinson-Department of Labor

Robert Brinson-Department of Public Safety  
Tonia Brown -Office of the State Controller  
Leon Browning-UNC General Administration  
Taylor Brumbelee-Office of the State Controller  
Ryan Brummeyer-Department of Health and Human Services  
Helen Buck-NC A and T State University  
Heath Bullock-Department of Health and Human Services  
Anita Bunch-Department of Revenue  
Katherine Burckley-NC A and T State University  
James Burke-Department of State Treasurer  
Jean Burke-Department of Public Safety  
Ginger Burks Draughon-NC State University  
George Burnette-UNC School of the Arts  
Timothy Byrd-UNC Hospitals  
Kathryn Caler-Department of Agriculture  
Edith Cannady-Office of the State Controller  
Cynthia Capps-Department of Commerce  
Kevin Carlson-Department of Commerce  
Samantha Carter-Department of Transportation  
Wynona Cash-Office of the State Controller  
Angelika Chafalovitch-Department of Public Safety  
Carole Chalifour-Office of Information Technology Services  
Susan Charlton-Department of Public Safety  
Steve Chase-Wildlife Resources Commission  
Jeannie Chen-NC State University  
James Cherokee-Department of Public Safety  
Jordan Chippewa-Office of State Auditor  
Elizabeth Colcord-Office of the State Controller  
Bruce Cole-Gaston College  
Crystal Cole-Office of the State Controller  
Lorie Coley-Department of Transportation  
Cindy Day Collie-Alamance Community College  
Jennifer Coltrane-NC State University  
Manasa Cooper-Department of State Treasurer  
Adrienne Covington-Nash Community College  
Dorene Creech-Department of Transportation  
Shannon Creech-Department of Justice  
Elizabeth Cutchin-UNC at Chapel Hill  
Joy Darden-Office of the State Controller  
Clayton Darnell-Office of the State Controller  
Ross Davidson-NC Education Lottery  
Angela Davis-UNC at Chapel Hill  
Bertha Davis-Department of Transportation  
Diane Davis-NC A and T State University  
Joshua Davis-Department of Cultural Resources

Rod Davis-Department of Health and Human Services  
Steve Davis-Department of Public Safety  
Joyce Davis-Freeman-Department of Environment and Natural Resources  
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John Del Greco-Department of Public Safety  
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Debbie Dryer-Office of the State Controller  
Dana Dupree-UNC School of the Arts  
Ken Durham-Department of State Treasurer  
Brian Durkin-UNC at Chapel Hill  
Michael Durkin-Department of Transportation  
Fred Duyck-Industrial Commission  
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James Einloth-NC Partnership for Children  
Bivian Ejimakor-NC A and T State University  
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Larna Griffin-State Education Assistance Authority  
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Michelle Hall-Fayetteville Technical Community College  
Jericho Hallimore-Rex Healthcare  
Keith Hammonds-Department of Public Safety  
Jennifer Harkness-Economic Development Partnership of  
North Carolina  
Keith Harris-UNC at Chapel Hill  
Winston Harrison-Department of Transportation  
Elizabeth Haynes-USS North Carolina Battleship Commission  
Maggie Heffelfinger-NC State University  
Jeffrey Henderson-Fayetteville State University  
Thomas Henry-Halifax Community College  
Freda Hilburn-Department of Commerce  
Shannon Hobby-Department of Commerce  
Sim Hodges-NC Housing Finance Agency  
Milburn Holbrook-NC State University  
Rebecca Hooks-Rowan-Cabarrus Community College  
Donald Hoover-Department of Commerce  
Jim Horne-General Assembly  
Heather Horton-Department of Commerce  
LaToya Horton-UNC at Chapel Hill  
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William Hosterman-UNC Hospitals  
John House-Centennial Authority  
Troy Howell-UNC at Chapel Hill  
Kris Hudson-Department of Insurance  
Larry Huffman-Department of Health and Human Services  
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Bryan Jenkins-NC Community College System  
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Sherri Johnson-Office of the State Controller  
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Heidi Kozlowski-NC State University  
Kathy Lagana-Office of the State Controller  
Karin Langbehn-Pecaut-UNC at Chapel Hill  
Darlene Langston-Department of Public Safety  
Michelle Lassiter-NC Education Lottery  
Kizzy Lea-Rowan-Cabarrus Community College  
Rachel Leaprot-Department of Health and Human Services  
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Tracey Lemming-UNC at Chapel Hill  
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Lauren Lemons-Office of the State Controller  
John Leskovec-Office of State Budget and Management  
Jennifer Leung-UNC General Administration  
Shaomin Li-Asheville-Buncombe Tech Community College  
Cathy Lively-Office of Information Technology Services  
Penny Locklear-UNC at Pembroke  
Tami Luckwaldt-Department of Insurance  
Arun Malik-UNC at Chapel Hill  
Jessica Mapes-Office of State Auditor  
Tonya Marriott-Department of Transportation  
Jo Ann Martin-Department of Health and Human Services  
Stephen Matheny-Isothermal Community College  
Tabitha Mbaka-Department of Transportation  
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Rachel McDonald-Office of State Auditor  
Biff McGilvray-Department of State Treasurer  
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Tammy McHale-UNC at Chapel Hill  
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Marvin Miller-Department of Public Safety  
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William Miller-UNC Hospitals  
Firoza Mistry-UNC Hospitals  
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Cynthia Mixter-NC Community College System  
Cynthia Modlin-East Carolina University  
LaTasha Moore-James Sprunt Community College  
Pattie Moore-Boyette-UNC Hospitals  
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Debra Neal-Department of Public Safety  
Robert Newby-Vance-Granville Community College  
Jim Newman-Department of Secretary of the State  
Tiffiney Newton-Department of Health and Human Services  
Hans Norland-Department of Public Safety  
Jones Norris-Department of State Treasurer  
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Tony Norwood-Department of Administration  
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Jennifer Pacheco-Office of the State Controller  
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Paul Palermo-Department of State Treasurer  
Bridget Paschal-NC Utilities Commission  
Tracy Patty-NC State University  
Martha Pendergrass-UNC at Chapel Hill  
Amy Penson-Isothermal Community College  
Johnny Peterson-Craven Community College  
Phyllis Petree-UNC at Chapel Hill  
Meera Phaltankar-UNC at Chapel Hill  
Tina Pickett-Department of Health and Human Services  
John Pierce-UNC at Asheville  
Rick Pieringer-Office of the State Controller  
Tiesha Pope-Department of Justice  
Ben Poulson-UNC at Chapel Hill  
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Ashley Price-Office of State Auditor

David Price-NC State University  
Phillip Price-Central Carolina Community College  
Ted Price-Office of State Auditor  
Sally Pulley-Department of Agriculture  
Dawn Quist-East Carolina University  
Karen Rackley-NC State University  
Betty Jo Ramsey-Southeastern Community College  
Chandrika Rao-UNC at Chapel Hill  
Lionnetta Raynor-Department of Transportation  
Monica Reid-Department of State Treasurer  
Samantha Reynolds-Blue Ridge Community College  
Paula Ricard-Real Estate Commission  
Lucy Ringland-Office of State Budget and Management  
Francine Rizzo-UNC at Pembroke  
Chavon Robbins-Department of Health and Human Services  
Jeremy Roberts-Office of the State Controller  
Wayne Rogers-Department of Transportation  
Zach Rogers-Office of State Auditor  
Janet Rust-Department of Labor  
Lynne Sanders-UNC General Administration  
Camilla Sandlin-NC Education Lottery  
Joanie Saucier-Department of Public Safety  
Cher Savas-Rex Healthcare  
William Schmidt-Department of Cultural Resources  
Thomas Schneeberger-UNC at Chapel Hill  
Troy Scoggins-Department of Health and Human Services  
Bill Scott-Department of Health and Human Services  
Peta-Gaye Shaw-Department of Administration  
Cheterra Sheff-Department of Transportation  
Teresa Shingleton-Office of the State Controller  
Kim Simmons-Office of State Auditor  
DP Singla-UNC General Administration  
Virginia Sisson-Office of the State Controller  
Betty Smith-Fayetteville Technical Community College  
Brian Smith-UNC at Chapel Hill  
Charles Smith-Fayetteville Technical Community College  
Debra Smith-Halifax Community College  
Laurie Smith-Department of Transportation  
Randy Smith-Office of the State Controller  
Shawn Smith-NC State University  
Susan Ann Smith-Wildlife Resources Commission  
Nancy Sollosi-Guilford Technical Community College  
Kathy Sommese-Department of Health and Human Services  
Kenneth Spayd-UNC at Pembroke  
Chet Spruill-Department of Health and Human Services

Jay Stanley-Bladen Community College  
Jennifer Starsick-Davidson County Community College  
Rachel Stephens-Office of State Auditor  
Karen Stevenson-UNC at Greensboro  
Danny Stewart-Department of Health and Human Services  
Justin Stiles-UNC at Chapel Hill  
John Storment-UNC Hospitals  
Carol Strickland-Fayetteville State University  
Lisa Stubbs-Office of the State Controller  
Mike Suggs-NC Education Lottery  
Hannah Sullivan-Office of State Auditor  
Michael Sullivan-Rex Healthcare  
Amy Szalaj-Department of State Treasurer  
Crystal Talmadge-Department of Labor  
Marsha Tapler-Office of Information Technology Services  
Marla Tart-Wake Technical Community College  
Shereen Tawfik-Department of Health and Human Services  
John Taylor-General Assembly  
Kimberly Thomas-NC Education Lottery  
Nancy Thomas-Office of the State Controller  
Randy Thomas-Office of the State Controller  
John Thompson-Department of Health and Human Services  
Deana Thorps-Department of Transportation  
Debbie Todd-Fayetteville Technical Community College  
Shirley Trollinger-Office of the State Controller  
Angie Tucker-Asheville-Buncombe Tech Community College  
Jim Tulenko-Office of the State Controller  
Christopher (Mark) Tyler-Department of Insurance  
Alvenia Uitenham-NC A and T State University  
Kimberly Van Metre-Office of Information Technology Services  
Robert Vickery-UNC General Administration  
Prabhavathi Vijayaraghavan-Office of the State Controller  
John Michael Vollmer-UNC General Administration  
Helen Vozzo-Office of the State Controller  
Darlene Waddell-NC Global TransPark Authority  
Pam Wade-Office of State Auditor  
Hunter Wagstaff-UNC Hospitals  
Karen Walden-Wildlife Resources Commission  
Gary Wall-NC Central University  
Megan Wallace-Office of the State Controller  
Yiwen Wang-UNC at Chapel Hill  
Dianne Ware-Furlow-UNC at Chapel Hill  
Brian Watkins-Department of Transportation  
Sherma Weekes-Office of the State Controller

Lily West-Department of Public Safety  
Mary Jane Westphal-NC Global TransPark Authority  
Rex Whaley-Department of Environment and Natural Resources  
Ray Whitby-Office of State Auditor  
Kate Williams-Pitt Community College  
Susan Williams-UNC at Chapel Hill  
Jennifer Wilson-Department of Health and Human Services  
Joe Wilson-Department of Transportation  
Jennifer Wimmer-Department of State Treasurer  
Kathi Wimmer-UNC at Chapel Hill  
Steve Woodruff-Rockingham Community College  
Jennifer Wooten-Office of the State Controller  
Laura Yarbrough-Davidson County Community College  
Donna Yeager-Department of Health and Human Services  
David Yokley-Department of Revenue  
Willard Young-Department of Transportation  
Amber Young -Office of the State Controller  
Michael Zanchelli-Department of Health and Human Services  
Yelena Zaytseva-Office of State Auditor  
Ling Zhu-Department of Administration

## 2015 OSC Financial Conference December 15, 2015

### Attendees by Agency (371)

Bud Jennings-Administrative Office of the Courts  
Matthew Banko-Alamance Community College  
Cindy Day Collie-Alamance Community College  
Shaomin Li-Asheville-Buncombe Tech Community College  
Angie Tucker-Asheville-Buncombe Tech Community College  
Sheila Dockery-Bladen Community College  
Jay Stanley-Bladen Community College  
Samantha Reynolds-Blue Ridge Community College  
John House-Centennial Authority  
Phillip Price-Central Carolina Community College  
Johnny Peterson-Craven Community College  
Rusty Hunt-Davidson County Community College  
Amy Kepley-Davidson County Community College  
Jennifer Starsick-Davidson County Community College  
Laura Yarbrough-Davidson County Community College  
Bryan Brannon-Department of Administration  
Tony Norwood-Department of Administration  
Peta-Gaye Shaw-Department of Administration  
Ling Zhu-Department of Administration  
Kathryn Caler-Department of Agriculture  
Laura Greenwood-Department of Agriculture  
Sue Kearney-Department of Agriculture  
Sally Pulley-Department of Agriculture  
Cynthia Capps-Department of Commerce  
Kevin Carlson-Department of Commerce  
Elaine Freeman-Department of Commerce  
Freda Hilburn-Department of Commerce  
Shannon Hobby-Department of Commerce  
Donald Hoover-Department of Commerce  
Heather Horton-Department of Commerce  
Ron Jamison-Department of Commerce  
Bliss Kite-Department of Commerce  
Cathy Koegl-Department of Commerce  
Joshua Davis-Department of Cultural Resources  
Joseph DeBragga-Department of Cultural Resources  
Sarah Dozier-Department of Cultural Resources  
Susan Flowers-Department of Cultural Resources  
Derek Gee-Department of Cultural Resources  
Lori Oldham-Department of Cultural Resources  
William Schmidt-Department of Cultural Resources

Joyce Davis-Freeman-Department of Environment and Natural Resources  
Rex Whaley-Department of Environment and Natural Resources  
Gregory Alvord-Department of Health and Human Services  
Suzanne Beasley-Department of Health and Human Services  
Jeannie Betts-Department of Health and Human Services  
Michelle Blackwelder-Department of Health and Human Services  
Floyd Bowen Jr-Department of Health and Human Services  
Kevin Brackett-Department of Health and Human Services  
Ryan Brummeyer-Department of Health and Human Services  
Heath Bullock-Department of Health and Human Services  
Rod Davis-Department of Health and Human Services  
Alycia Gaither-Department of Health and Human Services  
Teresa Hosford-Department of Health and Human Services  
Larry Huffman-Department of Health and Human Services  
Mary Johnson-Department of Health and Human Services  
Gloria King-Department of Health and Human Services  
Rachel Leaptrot-Department of Health and Human Services  
Jo Ann Martin-Department of Health and Human Services  
Laketha Miller-Department of Health and Human Services  
Tiffiney Newton-Department of Health and Human Services  
Tina Pickett-Department of Health and Human Services  
Chavon Robbins-Department of Health and Human Services  
Troy Scoggins-Department of Health and Human Services  
Bill Scott-Department of Health and Human Services  
Kathy Sommese-Department of Health and Human Services  
Chet Spruill-Department of Health and Human Services  
Danny Stewart-Department of Health and Human Services  
Shereen Tawfik-Department of Health and Human Services  
John Thompson-Department of Health and Human Services  
Jennifer Wilson-Department of Health and Human Services  
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Michael Zanchelli-Department of Health and Human Services  
Bennie Aiken-Department of Insurance  
Laresia Everett-Department of Insurance  
Kris Hudson-Department of Insurance  
Tami Luckwaldt-Department of Insurance  
Christopher (Mark) Tyler-Department of Insurance  
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Shannon Creech-Department of Justice  
Tiesha Pope-Department of Justice  
Jack Brinson-Department of Labor  
Janet Rust-Department of Labor

Crystal Talmadge-Department of Labor  
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Samuel Fuller-Department of Public Instruction  
Khalid Awan-Department of Public Safety  
Robert Brinson-Department of Public Safety  
Jean Burke-Department of Public Safety  
Angelika Chafalovitch-Department of Public Safety  
Susan Charlton-Department of Public Safety  
James Cherokee-Department of Public Safety  
Steve Davis-Department of Public Safety  
John Del Greco-Department of Public Safety  
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Darlene Langston-Department of Public Safety  
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Debra Neal-Department of Public Safety  
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Jackie McKoy-Department of Revenue  
David Yokley-Department of Revenue  
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Manasa Cooper-Department of State Treasurer  
Ken Durham-Department of State Treasurer  
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Charles Smith-Fayetteville Technical Community College  
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Beth Edmondson-Golden Leaf Foundation  
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Katherine Burckley-NC A and T State University  
Diane Davis-NC A and T State University  
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Ross Davidson-NC Education Lottery  
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Mike Suggs-NC Education Lottery  
Kimberly Thomas-NC Education Lottery  
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Mary Jane Westphal-NC Global TransPark Authority  
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John Meese-NC Housing Finance Agency  
James Einloth-NC Partnership for Children  
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Randy Bennett-UNC at Greensboro  
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