Presenter Information

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To Report Allegations

- E-mail: oig@nsf.gov
- Telephone: 703-292-7100
- Anonymously: 1-800-428-2189
- Write: 4201 Wilson Blvd.

Arlington, VA 22230
National Science Foundation

NSF annual budget: $4.789 billion (in Year 2002)

NSF's share of federal funding for all basic research done at academic institutions: 23%

Number of organizations (colleges and universities, schools, nonprofit institutions, and small businesses) receiving NSF funds each year: 1,800
National Science Foundation

Number of proposals that NSF competitively reviews each year: 32,000

Approx. number of total awards funded each year: 20,000

Approx. number of new awards funded each year: 10,000

Number of merit reviewers yearly: 50,000

Number of reviews done each year: 250,000
NSF’s OIG

- The Inspector General Act of 1978, as amended, created OIGs in most Federal Agencies.
- The National Science Board created the NSF OIG on February 10, 1989
- OIGs prevent and detect waste, fraud and abuse
- NSF OIG also handles allegations of research misconduct
NSF’s Office of Inspector General

Our staff:

- administrators,
- attorneys,
- auditors,
- criminal investigators, and
- scientists
Office of Investigations

- OIG’s responsibilities include the detection and prevention of waste, fraud, and abuse involving NSF programs and operations.

- OIG investigations conducts civil, criminal, or administrative investigations.
Sources of Allegations**

- Principal Investigators
- NSF Program Officers
- Other NSF Employees
- Review Panelists
- Other Government Agencies
- Graduate Students
- University Administrators
- Contractors
- Anonymous Hotline Callers or Informants

**Anyone may confidentially contact OIG to report potential wrongdoing
Common Violations

Violations

- Plagiarism
- Fabrication
- Falsification of Data
- Embezzlement/Theft
- Fraud
- False Statements or Claims
- Conflict of Interests
- Obstruction of Justice
- Civil False Claims
Investigative Process

- Conduct preliminary research, determine jurisdiction, identify issues, and gather evidence
- Objective investigation of substantive allegations
- As appropriate, refer to audit, other agency OIG
- Prepare Report of Investigation
- Work with NSF, DOJ, and awardees to develop appropriate resolutions to protect the interests of the Federal government and the U.S. taxpayer
Institutional Role

- Notify OIG
  - of allegations of wrongdoing
  - of significant financial or administrative problems
  - of research misconduct issues
- Take appropriate remedial actions
Institutional Role, cont’d

- If reporting wrongdoing, financial problems, administrative problems
  - Respond to request or subpoena for documentation
  - Provide Financial Records
  - Provide Research Records
  - Provide Internal Audits
Institutional Role, cont’d

- If reporting research misconduct
  - Expect referral of the matter to the University for investigation
  - Permit interviews of employees
  - Conduct any required institutional investigation
Common Types of Administrative Allegations

- Plagiarism (verbatim, Intellectual theft) (42%)
- NSF Procedures (8%)
- Merit Review (6%)
- Mishandled Investigations / Retaliation (4%)
- Abuse of Collegues/Students (5%)
- Impeding Research Progress (2%)
- Fraud (7%)
- Falsification (16%)
- Data sharing (2%)
- Conflict of Interests (2%)
- Animal / Permit / Biohazard / Humans (2%)

Legend:
- Green: 42%
- Cyan: 6%
- Purple: 8%
- Pink: 7%
- Dark Purple: 5%
- Black: 3%
- Light Purple: 2%
- Light Green: 2%
- Yellow: 2%
Administrative Consequences

- Reprimand
- Training or teaching
- Additional oversight
- Certifications
- Assurances
- Public disclosure
- Withdrawal of proposal(s)
- Termination of or limitations on award(s)
- Debarment
- Dismissal
Common Types of Civil/Criminal Allegations

- Theft/Embezzlement (31%)
- False or Fraudulent Statements (24%)
- Miscellaneous* (20%)
- False or Fraudulent Claims (13%)
- Conflicts of Interest (9%)
- Computer Fraud (3%)

*Includes mail fraud, false identification insurance fraud, impersonating a government officer, and copyright infringement.

Data gathered from NSF OIG closed Investigative files (1990 – Present).
Civil/Criminal Consequences

- Incarceration
- Probation
- Termination of Employment
- Restitution
- Termination of Grant
- Civil Actions
- Debarment
- Reprimand
A Partnership Approach: Fostering, Developing, and Maintaining Research Integrity
Elements of Successful Compliance Programs

**Integrity**
- The right thing, at the right time, and in the right way.
- A sound, complete **system**

**Systems**
- **Partnerships** of regularly interacting or inter-dependent groups forming a unified whole

**Partnership**
- The government, institutions, and research community
The Partnership

The Agency (National Science Foundation)
- OIG
- Program Officers
- Grants Officers

Institution Officials
- Administrative
- Financial
- Education

Researcher
- Students
- Colleagues
- Postdocs
- Administration
Agency Commitment (NSF’s)

- Clear articulation of rules/expectations
- Timely notification
- Responsiveness
- Limited bureaucracy
- Coordination between agencies
- Balance compliance, institution responsibility and latitude
- Numerous opportunities for funding (CAREER, REU, Fellowships, SGER, etc)
Expectations

Certifications/Obligations to the Federal Government

- Reasonable, allowable, allocable, consistent
- Verifiable charges and claims (records)
- Adherence to laws, regulations, and policies
- Appropriate documentation
- Trained and responsible individuals

Rules apply to:

- Employees
- Sub-contractors, Suppliers, or Affiliated Researchers
- International collaborators, SBIRs
NSF’s Office of Inspector General

- Provide leadership; coordinate and recommend policies necessary to:
  - Prevent and detect fraud, waste, abuse
  - Promote economy, efficiency, effectiveness

- Features:
  - Independent of agency management
  - Jurisdiction (NSF activities, programs, operations)
  - Staff of experts: administrators, attorneys, auditors, criminal investigators, and scientists

Responsible for ensuring the integrity in NSF’s programs and operations
Institutional Commitment

Overall
- Financial and administrative system to manage projects and staff
- An environment in which employees can operate with integrity

Proposal
- Certify compliance with terms and conditions

Award
- Full responsibility for conduct of project (e.g. Article 1, GC-1)
- Responsibility for administrative, financial, and research management and oversight
Institutional Compliance

7 elements of an effective compliance program

1) Reasonable Compliance Standards and Procedures

2) Specific High-level Personnel Responsible

3) Due Care in Assignments with Substantial Discretionary Authority

4) Effective Communication of Standards and Procedures
Institutional Compliance

5) Establish Monitoring and Auditing Systems and Reporting System (Whistleblowing without fear of Retaliation)

6) Consistent Enforcement of Standards through Appropriate Mechanisms (including failure to detect)

7) Respond Appropriately to the Offense (reporting to law enforcement, modify program, prevention)
Researcher Commitment

**Overall -- Uphold ethics and standards of community**

- Submitted Proposals
  - Respond to the review criteria
    - Intellectual Merit of Proposal
    - Broader Impacts of Activity (education and training)
  - Know and adhere to the rules
  - Propose innovative research

- Award
  - Conduct the funded activity
  - Know the rules
  - Ensure compliance and education of staff, students
Considerations

**Submissions must:**

- Be of the **highest level of scholarship**
- Propose sound, innovative research
- Be accurate and complete
- Be accompanied by complete research approvals (human / animal subjects)
- Incorporate comprehensive financial and administrative oversight
- Contain accurate Current and Pending Support / Biographical Sketch / Annual and Final Reports
- Respect confidentiality of peer review
- Comply with misconduct and COI policies
NSF’s Requirements

- The awardee has full responsibility for the conduct of the project or activity supported under this award and for adherence to the award conditions. Although the awardee is encouraged to seek the advice and opinion of NSF on special problems that may arise, such advice does not diminish the awardee’s responsibility for making sound scientific and administrative judgments and should not imply that the responsibility for operating decisions has shifted to NSF.

Reference: NSF’s Grant General Conditions, Article 1.
By accepting this award, the awardee agrees to comply with the applicable Federal requirements for grants and cooperative agreements and to the prudent management of all expenditure and actions affecting the award.

Reference: NSF’s Grant General Conditions, Article 1.
Key Focus Areas

- Administration
- Finance
- Research
Administrative Spotlight

- Conflicts of Interest
- Research Misconduct
- Lobbying
- Patent Disclosure (Bayh-Dole Act)
- Training Requirements
- Original Work
- Current and Pending Support Information
  - time and effort (% to each project not > 100%)
  - 2/9th rule limiting summer salary
- Records Retention (financial, research, other)
- Equipment Tracking and Use
- Debarment, Drug free workplace, EEO
Financial Management Spotlight

- Internal Systems Management
  - Comply with NSF Grant Conditions
  - Comply with OMB Circulars
- Contracts and Subcontracts
- Cost Sharing
- Program Income (research and conference grants)
- Re-budgeting
- FCTRs/Annual and Final Reports
- Equipment Purchase and Sale
- Subcontract Payments
Research Management Spotlight

- Human Subjects Review (IRB)
- Animal Welfare (IACUC)
- Radiation Safety
- Biosafety (Recombinant DNA and other issues)
- Collection Permits
- Variety of Environmental Permits
- Data or Sample Sharing
- Change of Scope
Research Management (cont’d)

- Change or Absence of PI
- Current and Pending Support Information
- Duplicate Proposal Submissions
- Annual and Final Reports
- Bioterrorism Preparedness and Response Act of 2002 (human, animal, or plant agents or toxins)
- Enhanced Border Security Act (student registration)
Oversight and Monitoring

- Designed to balance compliance, awardee and agency responsibility and latitude, bureaucracy.

Oversight

- Site visits (Agency)
- Audits (A-133, OIG)
- Inspections (OIG)
- Administrative, civil or criminal investigations (OIG)
- Focused reviews from investigations (OIG)
Consequences** of Significant Errors

- Special Oversight/Review Status
- Administrative Sanctions
- Suspension or Termination of Awards
- Civil/Criminal Violations
- Suspension/Debarment
- Corrective Action Plans

**For either awardee or PI
Education Prevention and Integrity

Focus on Integrity: People and Attitude

- Integration of Process and Education
- Integrity of system to ensure comprehensive oversight
- Specific oversight programs,
  - individual responsibilities
  - committees function and are properly convened
  - Work is completed and documented
- Training for managers, researchers, support and oversight staff
- Partnership and communication
Let’s Talk About

- Cost Sharing
- Program Income
- Effort Reporting
- Sub-recipient Monitoring
- Travel
- Participant Support
Cost Sharing
NSF Cost Sharing Policy Revision(s)

- Important Notice #128 – January 24, 2003
  - NSF Statutory 1% (aggregate or award) or more stated in program solicitation
  - Where tangible benefit to awardee
  - Curriculum development, program income, instrumentation, equipment, facilities
  - Eligibility Criterion not Review Criterion
Eliminates program specific cost sharing

Requires only the existing statutory 1% cost sharing in all unsolicited research proposals

Retains all previously issued program solicitations that specify a cost sharing requirement
NSF Cost Sharing Policy

- NSF Program Officers – not to negotiate or impose additional institutional commitments – may discuss “bottom line”

- Any reduction of 10% or more of the amount of project “should be” accompanied by a corresponding reduction in scope of the research.
NSF Cost Sharing – Line M

- Line M is the amount subject to audit by OIG
- NSF Statutory 1% - not on Line M
  - Unless the program solicitation requires
- Proposers should not include cost sharing on line M
  and/or should not exceed the amount of cost sharing required by the solicitation
- Potential FastLane system changes to mask Line M
  for reviewers.
OMB A-110 Cost Sharing

- Verifiable from recipient’s records
- Necessary, reasonable, and allowable
- Not paid by Federal Govt. or claimed on another Federally sponsored project
- Conform to this circular and cost principles
- Provided for in approved budget
- Unrecovered Indirect Costs (NSF)
Cost Sharing - Valuation

- **Donated Space**
  - Fair rental value by independent appraisal

- **Property/Facilities/Supplies/Services/Equipment**
  - Certified value or Fair Market Value (FMV)

- **Services**
  - Employee, similar rate of pay plus FB
  - Third Party, regular rate of pay plus FB (less indirect costs)

- **In-Kind or Third Party**
  - Volunteer services – documented and supported
Cost Sharing Examples –
What not to do

- “Hits” on a web page valued at NSF daily Consultant limit based on computer count.
- Obsolete engineering software valued at list without being used on project.
- Proposed student work study stipends for engineering graduates instead claimed computer equipment outside scope of award.
- 3rd party costs of upgrading production facility claimed as cost sharing.
OIG Cost-Sharing Issues

- Is it real, is it documented, is it on time?

- Is 3rd Party C/S valued and documented correctly (donated software, services, old equipment)?

- Are credits for Educational & Volume discounts made?
OIG Cost-Sharing Issues

Accounting System

- separate account or sub-accounts of NSF award.
- Segregate from Department and General accounts into project specific accounts.

- Complete cost sharing or return NSF funds

- Cost sharing must relate to award objectives, allocable and necessary
Sub-recipient Monitoring
Key Points

- No significant part of the research or substantive effort under an NSF grant may be contracted or transferred without prior NSF authorization.

- The grantee shall submit
  - a clear description of the work to be performed;
  - the basis for selection of the sub-awardee (except for collaborative/joint arrangements4); and
  - a separate budget for each sub-award.
Key Points, cont’d

- NSF authorization will be by an amendment to the grant

- Grantees shall ensure that the following articles, flow down to all sub-awardees:
  - Articles 5, 7, 9, 10, 11, 12, 17, 18, 19, 20, 21, 22, 23, 24, 27, 28, 29, 30, 31, 32, 34, 36, 37, 38, 39 and 40.
NSF Expectations

- Grantee has an effective system for monitoring sub-recipients – “risk based approach”
  - program complexity, dollar amount, percentage passed through
  - Sub-recipient (contract) vs. vendor (purchase order)
  - Nature of deliverable (a thing, research, a service)
  - fixed price vs. cost reimbursement.
- Type of sub-awardee
NSF Expectations, cont’d

- Technical, Financial, and Compliance reviews
- Comply with A-133 subpart (c) section 300 for Awardee
- Comply with A-133 subpart (d) section 400 for Sub-awardee
- Comply with A-110 parts 40-48 on responsibility of Prime
Remember:

- Identify Federal awards received & expended – CFDA, dollars expended, program, agency
- Internal controls
- Advise sub-recipients of Federal & contractual requirements
- Monitor sub-recipients to insure compliance and to achieve performance goals
- Ensure policies and procedures for staff managing contract or sub-award
- Insure A-133 audit reports received
- Follow-up and take corrective action
Program Income
Program Income

Program income is:

- **gross income** earned by the awardee
  - *directly generated* by a supported activity, or
  - *earned as a result* of the award
Program Income, cont’d

Two types:

- **Research Grant**
  
  Must be received or accrued during the period of the award and added to the funds committed to the project by NSF and used to further project objectives (GC-1)

- **Conference or Workshop Grant**
  
  No time limit on income; income used to offset NSF contribution (FL-26)
Program Income Review

- Segregable
- Accountable
- Comply with the rules
- Reasonable use
What we found

- Unreported
- Spouses
- Liquor
- Unnecessary items
- Federal employees
- Grantee employees
- Excessive travel
Effort Reporting
General Rules

- **Total compensation** is reasonable and is not included as indirect costs
- **Academic Year Salaries** are based on regular compensation
- **Outside Academic Year Salary** may not exceed the base salary divided by the number of months in the period for which the base salary is paid.
- **Summer Salary** may not exceed two-ninths of the academic year salary aggregated over all NSF awards
More Rules

- **Extra Compensation Above Base Salary** only for education projects where specifically approved by NSF.

- **Sabbatical Leave Salary** must be approved by NSF and be
  - proportional to the service rendered;
  - in accordance with established institutional sabbatical policies
  - may not exceed the individual's base salary
Remember:

- Current and Pending Support
- Summer Salary
- No one can work more than 100% of their time
- Must be after the fact certification
- Two signatures (individual and reviewer)
- No whiteout
Participant Support
Participant Support Costs

- Direct costs for items such as stipends, subsistence or travel allowances and registration fees for:
  - participants (but not employees) attending meetings, conferences, symposia or training projects.
  - non-NSF Federal employees when funds do not duplication parent agency funding
  - dissemination and sharing of research results and publication / distribution of grant materials

- Indirect cost recovery is reduced for participant support
Stipends, Per Diem, or Subsistence Allowances

- Are:
  - limited to the days of attendance plus actual travel time by the most direct route available.
  - reduced if registration covers food

- Are not for:
  - per diem or similar expenses for local participants in the conference.
  - trainees who are receiving compensation from other Federal sources
  - NSF employees
Cautions:

- Funds may not be used for other purposes without the specific prior written approval of the cognizant NSF.

- Awardee must account for participant support costs separately.
Travel
Travel Costs

- Authorized costs include
  - Transportation
  - Lodging
  - Subsistence and related items

- For
  - project personnel
  - outside consultants on business related to the project
Travel Costs, Cont’d

- Foreign travel costs of dependents can be allowable if consistent with grantee policy and sponsor is
  - full-time, key and essential to the research
  - away for six months or more
- The difference between economy airfare and a higher class airfare is unallowable
- Travel must be consistent with Fly America Act
Travel Costs, cont’d

- US Carriers
- Reasonable expenses
- May not cover entire trip – not for spouse, personal vacations, other business interests
- Must be documented and reviewed
- No lobbying
Signature Responsibilities
Proposal Signatures

- Compliance with award terms and conditions
- Accuracy and completeness of statements
- COI Policy
- Drug-Free Workplace
- Debarment and Suspension
- Lobbying (proposal >$100,000)
Certification for Authorized Organizational Representative or Individual Applicant:

By signing and submitting this proposal, the individual applicant or the authorized official of the applicant institution is: (1) certifying that statements made herein are true and complete to the best of his/her knowledge; and (2) agreeing to accept the obligation to comply with NSF award terms and conditions if an award is made as a result of this application.

Willful provision of false information in this application and its supporting documents or in reports required under an ensuring award is a criminal offense (U. S. Code, Title 18, Section 1001).

In addition, if the applicant institution employs more than fifty persons, the authorized official of the applicant institution is certifying that the institution has implemented a written and enforced conflict of interest policy that is consistent with the provisions of Grant Policy Manual Section 510; that to the best of his/her knowledge… . . .

Debarment Certification

Certification Regarding Lobbying

Certification for Contracts, Grants, Loans and Cooperative Agreements

AUTHORIZED ORGANIZATIONAL REPRESENTATIVE SIGNATURE DATE
Will this form provide you enough information to know that compliance issues raised by the proposed worked were reviewed and approved?
**Electronic or Paper Format**

Ensure coordinated reviews and approvals.

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**PROJECT TYPE**
- [ ] Competitive Renewal
- [ ] Continuation
- [ ] New Proposal
- [ ] Pharmaceutical Contract
- [ ] Supplemental Request

**Account Number, if continuation:**

**Date Proposal Submitted to Sponsor:**

**Previous Proposal Number, if any:**

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**INVESTIGATORS**

<table>
<thead>
<tr>
<th>PI Name</th>
<th>PI SSN</th>
<th>PI Phone</th>
<th>PI Fax</th>
<th>PI E-mail Address</th>
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</table>

Department Receiving Credit for Award:

PI's Mail Point:

Other Contact (Net PI):

Contacts Phone: Contacts Fax: Contact E-mail Address

Co-PI Name Co-PI Phone Co-PI Fax Co-PI E-mail Address

(For additional Co-PIs, attach an additional sheet. List employees only.)

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**Sponsor/Agency Name:**

Agency Program:

Sponsor Contact:

Title:

Address:

City:

State:

Zip:

Phone:

Fax:

E-Mail:

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**Funding Source:**
- [ ] Federal Funded
- [ ] State Funded
- [ ] Local Government
- [ ] For Profit Corporation
- [ ] Nonprofit Organization
- [ ] None

**Project Title:**

*Note: For projects requiring IRB or IACUC approval, the project title entered here must be the same as what appears on your IRB or IACUC application.*

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**INITIAL BUDGET, PERIOD 1**

From: 08/01/00 To: 07/31/01

**PROJECT PERIOD 2**

From: 08/01/00 To: 07/31/05

Tuition: Graduate Assistant stipend/allowances are requested. [Yes][No]. If yes, tuition and fees should also be requested. If yes, and tuition/fees not requested, please explain.

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**Cost-Sharing**

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<th>Cost-Sharing</th>
<th>Required</th>
<th>% of</th>
<th>% Voluntary</th>
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<td>First-Year Commitments: Department</td>
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<td>Total</td>
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<tr>
<td>Indirect Costs</td>
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</tr>
</tbody>
</table>

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**Approvals**

- [ ] Biohazards
- [ ] Radioactive Materials
- [ ] Human Subjects
- [ ] Laboratory Animals

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**Conflict of Interest Certification**

Do any participating faculty, staff, or students (or their spouses or dependent children) have any financial interest such as royalty, equity, or other payments (e.g., consulting, salary, etc.) in the sponsor or other entities having a financial interest in intellectual property, products or services that are the subject of the proposed research? [Yes][No].

If yes, provide a completed Financial Interest Disclosure form to your chairperson. Financial Interest Disclosure forms can be obtained from DSR or under Conflict of Interest (E-308) at [http://www.research.edu/efficDisclosure.html](http://www.research.edu/efficDisclosure.html).

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**UNIVERSITY ENDORSEMENTS**

The attached project has been examined by the officials whose signatures appear below. The principal academic review of the project is the responsibility of the Department (Center/Institute) and College. These signatures indicate that the signers are familiar with the project and are satisfied with and responsible for all commitments in the project as they relate to their areas of responsibility.

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**Lawman's Description:**
Keys to Success

- Focus on research objectives.
- Know requirements (award letter and manuals)
- Adequate and realistic business plans
- Good accounting practices
- Document approvals by and conversations with awardee and NSF program and grant officials
- Ask if you have questions!!!!
Where can I get information on-line?

- General
  - **www.nsf.gov**

- Grant Conditions

- Regulations
Training to Enhance Integrity
Topics

- Compliance with rules and regulations
  - Merit Review
  - Mentor/ Trainee Responsibilities
  - Human Subjects
  - Animal Welfare
  - Research Misconduct
  - Collaborative Research
  - Publication Practices/ Authorship
  - Data Sharing/ Acquisition/Management/Ownership
  - Financial Management
  - Conflict of Interest and Commitment
Compliance with Rules and Regulations

- **NSF**
  - Clear articulation of rules
  - Guidance by staff, on web, and in manuals
  - Training

- **Grantee**
  - Know and implement the rules
  - Ask questions, document
  - Provide training
  - Pay attention to the certifications and assurances

- **PI**
  - Know and teach the rules
  - Reinforce the importance of integrity
  - ASK, ASK, ASK
Merit Review (Peer Review)

- NSF
  - Confidential Process
  - Conflicts of Interest
  - Careful selection of reviewers
  - Unbiased review and decision making

- Grantee
  - Make time available for participation

- PI
  - Respect confidentiality
  - Disclose potential conflicts
  - Careful review and assessment
  - Carefully evaluate both review criteria
Mentor/Trainee Responsibilities

- NSF
  - Funding for specific training programs
  - Review criterion two

- Grantee
  - Full responsibility for conduct of project
  - All statements in proposal true and complete to best of knowledge

- PI
  - Proposal must describe broader impacts, including:
    - promote teaching, training, learning
    - Results disseminated broadly
    - Benefits to society
Human Subjects

- NSF
  - GPG and GMP guidance
  - 1036 review and certification by PO
  - Annual report review
  - PAM

- Grantee and PI
  - GPG and GPM guidance
  - Proposal cover page
  - Annual report certification
  - IRB composition and research review
Animal Welfare

- NSF
  - GPG and GMP guidance
  - www.nsf.gov guidance
  - 1036 review and indication of AW research
  - Annual report review

- Grantee and PI
  - GPG and GPM guidance
  - Proposal cover page
  - Annual report certification
  - IACUC composition and research review
Other compliance reviews

- Collection Permits
- Environmental Permits
- Biosafety Committees
- Foreign students
Research Misconduct

- **NSF**
  - Policy at 45 CFR689
  - Referral policy --- work with institution
  - Investigate / adjudicate allegations

- **Grantee**
  - Policy in place and implemented
  - Educate to prevent
  - Investigate and report allegations

- **PI**
  - Model of ethical conduct (it starts at home)
  - Do the right thing and make the tough calls
  - Ensure do’s and don’ts are CLEARLY explained and enforced
Collaboration and Publication Practices/Authorship

- NSF
  - Encourage collaboration, multidisciplinary proposals

- Grantee
  - Encourage written “pre-nuptial”

- PI
  - Execute “pre-nuptial”
  - Adhere to “pre-nuptial”
  - Like any relationship, it takes work
  - Teach by example
Data Sharing

- NSF
  - NSB policy on data sharing/record retention in GC-1
  - Some grant-specific requirements for sharing and posting on web

- Grantee
  - Laboratory notebook retention policies
  - Sample-sharing policies
  - Encourage timely publication

- PI
  - Timely publication and sharing
  - Encourage sharing with students/staff
  - Create an environment where sharing is positive and not a feared practice
Financial Management

- NSF
  - Educate
  - New awardee review
  - GC-1 / FDP
  - A-133 or OIG audits

- Grantee and PI
  - System in place, controls, oversight
  - Reasonable, allowable, allocable
  - Cost-sharing
  - Education
  - Documentation
Conflict of Interest

- NSF
  - GPG, GPM guidance
  - Certification in proposal

- Grantee
  - Policy in place and implemented
  - Compliance program (education, implementation, enforcement, audits)

- PI
  - Careful review and disclosure of potential conflicts
  - Ensure students staff are knowledgeable and responsive
Ensuring Integrity – It Takes All of Us

- Educate
- Communicate
- Enforce
- Learn
- Oversight
- Document
- REPEAT
Ethical Conduct of Research

The Management and Reporting of Research Misconduct Allegations
History

- 1981  Congressional Interest
- 1987-89  NSF and HHS Policies (and others)
- 1989  AAAS-ABA Meetings/other Society Efforts Notorious Cases
- 1992  NAS Report
- 1995  Commission on Research Integrity (Ryan Commission)
- 1996  HHS Implementation Report (Raub Report)
- 1996  NSTC Research Integrity Panel (OSTP Effort)
- 1999  HHS Implementation Plan (Intense Community Interest)
- 2000  OSTP Policy on Uniform Federal Definition and Procedures
OSTP Policy on Research Misconduct

- Federal Policy for addressing RESEARCH misconduct
- Contains definition and guidelines for procedures
- Defines F, F, P
  - violation of peer review
  - defines “research” and the “research record”
- All Federal agencies that support internal or external research will adopt
Basic Principles

- Discrete, separate phases: inquiry, investigation, adjudication, appeal
- Reliance on community-based standards (“serious deviation” or “significant departure”)
- Partnership with institutions
- Assessment of intent
- Assessment of act and intent by preponderance of the evidence
- Confidentiality for subjects and informants
- Fair, objective, accurate, timely, fact- and document- based process
- Similar actions to protect Federal interests
What is Research Misconduct

- **Fabrication, falsification, or plagiarism** in proposing or performing research funded by NSF, reviewing research proposals submitted to NSF, or in reporting research results funded by NSF.

- Includes proposals submitted to NSF in all fields of science, engineering, mathematics and education and results from such proposals.
Fabrication

Fabrication means making up data or results and recording or reporting them.
Falsification

Falsification means manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.
Plagiarism

Plagiarism means the appropriation of another person’s ideas, processes, results or words without giving appropriate credit.
Research record

The record of data or results that embody the facts resulting from scientific inquiry, and includes, but is not limited to, research proposals, laboratory records (both physical and electronic), progress reports, abstracts, theses, oral presentations, internal reports, and journal articles.
Research

Includes all basic, applied, and demonstration research in all fields of science, engineering, and mathematics. This includes, but is not limited to, research in economics, education, linguistics, medicine, psychology, social sciences, statistics, and research involving human subjects and animals.
Status of Policy Development

- 23 agencies support or conduct research
- >50% have drafted or established a RM policy
- Most policies provide for IG investigations
Steps in Handling Allegations

<table>
<thead>
<tr>
<th>Step</th>
<th>Time-frame Targets</th>
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<tr>
<td>1. Receipt</td>
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<tr>
<td>2. Inquiry</td>
<td>90 days - OIG or Awardee</td>
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<tr>
<td>3. Investigation</td>
<td>180 days - OIG or Awardee</td>
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<tr>
<td>4. Adjudication</td>
<td>120 days - NSF</td>
</tr>
<tr>
<td>5. Appeal</td>
<td>60 days - NSF</td>
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</table>
Factors Considered in Making Recommendations

Based on an evaluation of:

- scientific community’s assessment
- seriousness (potential interim action)
- act and intent
- evidence of a pattern
- impact on research record, research subjects, other researchers, institutions or public welfare

*using a preponderance of evidence standard*
Common Types of Administrative Allegations

- Plagiarism (verbatim, Intellectual theft) (40%)
- NSF Procedures (8%)
- Merit Review (6%)
- Mishandled Investigations / Retaliation (4%)
- Abuse of Collegues/Students (5%)
- Impeding Research Progress (2%)
- Fraud (7%)
- Falsification (16%)
- Fabrication (5%)
- Data sharing (2%)
- Conflict of Interests (2%)
- Animal / Permit / Biohazard / Humans (2%)
Consequences of a RM Finding

- Reprimand
- Training or teaching
- Additional oversight
- Certifications
- Assurances
- Public disclosure
- Withdrawal of proposal(s)
- Termination of or limitations on award(s)
- Debarment
Procedural Considerations - Administrators

- Confidential independent process
- FOLLOW INSTITUTION POLICY
- Notify OIG when you initiate an investigation
- Fair, accurate, timely, objective and thorough review
- Careful documentation
Procedural Considerations – Administrators, cont’d

- OIG provides assistance
- Presumption of innocence
- Integrated policies for investigation, adjudication, appeal, grievance
- Free of inappropriate bias and conflict
- FOIA and Privacy Act considerations
Procedural Considerations - Informant

- Confidential Review
- Fair, objective assessment
- Inform involved individuals of case resolution
- Informants are *not* part of the investigative team
Procedural Concerns - Subjects

- Confidential review
- Ask first for information
- Defer investigations to awardees (Assessment by peers)
- Multiple opportunities to provide input
- Independent adjudication
- Inform involved individuals of case resolution
Case Studies

1: Misrepresentation of Publication Status
   University Inquiry followed by OIG Investigation

2: Plagiarism and Violation of Confidential Peer Review
   OIG Inquiry to Deferred University Investigation (Joint ORI-OIG)

3: Seeking Funds for Research Already Completed
   OIG Inquiry to Deferred University Investigation

4: Fraudulent Data
   Incomplete University Inquiry followed by OIG Investigation

5: Misrepresentation of Credentials
   Company employee, OIG Investigation
Case: Misrepresentation of Publications

Allegation:

University receives an allegation that a PI misrepresented status of his manuscripts in a university publication by claiming they were submitted, when they were not.
The Process:
Inquiry, Investigation, Adjudication:

You are the responsible University official notified of the allegation, what must you consider and what must you do?

- Review university’s policies
- Review existing evidence
- Inform subject, university counsel
- Confidentiality and Conflict of Interests
- FOIA and Privacy Act considerations
- If required, initiate Inquiry: Convene and brief inquiry committee
- Timely, thorough, document-based
Facts After University Inquiry

- PI claims several manuscripts were “submitted when they were not.”
- Misrepresentations appeared in an NSF proposal
- Committee concludes there is substance to case
What do you, the Institutional Official, do next?

- Initiate Investigation
- Notify NSF Office of Inspector General (OIG)
  - Provide inquiry report
  - Accept deferral of investigation
  - Consider offer for on-site help
- Convene and brief investigation committee
Facts After University Investigation

- misrepresentations of 3 manuscripts in four proposals (most egregious “submitted” claim for incomplete draft manuscript)
- claim practice not consistent with those of subject’s scientific community
- evidence that subject’s practices changed as tenure decision approached
- could not establish level of “culpable intent”. . . subject believed that papers would be submitted by the time documents were reviewed
University Adjudication

- Conclude actions were misconduct
- Place letter of censure in personnel file
- Monitor internal and external submissions for 3 years
- Provide OIG with complete investigation report
What does our Office do?

- Assess report
- Determine Federal interest
- Seek additional information from investigating committee
- Conduct investigation to gather facts for Federal case
Complete Investigative Facts

- 7 proposals to 5 different entities (Federal, State, university groups) contained 40 misrepresentations
- 13 misrepresentations in two NSF proposals
- received $\approx 275 \text{ K} \text{ for 5 of these proposals
OIG considerations in assessing misconduct and making recommendations

- Substantive matter?
- Intent and seriousness of action
- Need to protect Federal interest
- Sufficiency of institution action sufficient
- Documentable evidence
- Need for correcting the record? Prospective impact?
- What were NSF actions in prior, similar cases?

We sent our Report of Investigation with recommendations to adjudicator (NSF’s Deputy Director)
Adjudication:
Findings and Actions by NSF

- Falsification of information in proposal
- Evidence of an extensive pattern
- Finding of misconduct
- Letter of reprimand
- 3-year certification requirement for the PI
- 3-year assurance by department chair
Case: Plagiarism and Violation of Confidential Merit Review

Allegation:

OIG informed that a proposal contained text plagiarized from a declined NSF proposal, reviewer suspected of plagiarism.
The Process:
Inquiry, Investigation, Adjudication:

- OIG conducts inquiry to determine substance
  - Gather and review evidence
    - source proposal, PI’s proposal
    - examine reviewer history
  - Contacted PI and requested explanation for text and his request that source proposal author not be used as reviewer
  - Determine sufficient substance
  - Defer investigation
Facts After OIG Inquiry

- Copied text (methodology, rationale, statistical package) identical to material in source proposal
- PI was not reviewer (received proposal from reviewer with request for assessment)
- No permission from NSF to share proposal
- PI claimed author was barred by PI’s Department practice from review
- Found same material (plus more) in funded NIH-proposal (insertions were in response to reviewer comments)
- Private communication with subject to learn facts ... letter opened within department
- Coordinate deferral with ORI
What do you, the responsible University Official, consider and do?

- Review university’s policies
- Review existing evidence
- Inform subject, university counsel
- Confidentiality and Conflict of Interests
- FOIA and Privacy Act
- IF REQUIRED--initiate inquiry: Convene and brief inquiry committee
- Timely, thorough, document-based
Facts After University Inquiry

- Department policy did not exclude author
- Effort to hide plagiarism by barring author from peer review
- Multiple abuses (apparent plagiarism and violation of confidential merit review)
- Possible evidence of pattern and self-deception
- Sufficient substance to proceed
What do you, the Institutional Official, do next?

- Initiate Investigation
- Notify NSF Office of Inspector General (OIG)
  - Provide inquiry report
  - Accept deferral of investigation
  - Consider offer for on-site help
- Convene and brief investigation committee
Facts After University Investigation

- Subject’s NSF proposal contained 5 sections of text copied from author’s confidential proposal
- No permission from author, author not barred from review
- Text was not offset or attributed
- Subject understood proposal was confidential
- Statements to OIG on statistical package, a methodology, rationale for experiments were “routine”
- Statistical package was not available to subject
- Actions were “improper, knowing, willful.”
- Single instance
- Preponderance of the evidence supported conclusions
- Misconduct in science
University Adjudication

- Prevent subject from being PI on Federal grant or contract for 3 years
- Bar from peer review for 3 years
- Inform all co-investigators of finding for 3 years
- Provide OIG with complete investigation report
- Noted could not implement recommendation 1 and 2. Did not renew subject’s appointment. Relocated him to different institute and retained NIH grant
What is OIG’s role?

- Assess report and attachments
- Determine Federal interest
- Seek additional information from investigating committee
- Conduct additional investigation to gather facts for Federal case
Complete Investigative Facts

- In review of evidence, found additional plagiarism in previously submitted proposals
- Additional plagiarism contradicted subject’s testimony that he had never done this before (not an isolated instance).
- Subject plagiarized text from two different sources into four different proposals
- Selectively copied and inserted materials in response to reviewer comments
- Acknowledged actions were improper
- Understood principles of confidential peer review, timing showed copied proposal for later use
We sent our Report of Investigation with recommendations to adjudicator (NSF’s Deputy Director)
Adjudication:

What finding and actions did NSF take?

- Prior to NSF’s Adjudication:
  - Through voluntary settlement agreement, ORI, required subject certify for 3 years to accuracy of proposals
  - Subject barred from peer review
  - Entered in NIH ALERT system for 3 years

- NSF’s adjudication followed discovery of additional plagiarism and dishonesty.
  - Barred from merit review for 2 years
  - Debar for 2 years

- Subject appealed to NSF’s Director. Director upheld Deputy Director’s decision.
Case: Proposal Seeking Funds for Already Completed Research

Allegation:

Reviewers alleged that a recent Ph.D. recipient misrepresented research already completed as work that would be done under the NSF proposal.
The Process:
Inquiry, Investigation, Adjudication

The Facts after OIG Inquiry

- The subject admitted that all of his proposed work was completed when he submitted the proposal.

- He directed that his collaborator’s signature be signed on the proposal's certification page without obtaining the collaborator’s permission.

- We informed the institution of need for investigation.
University Accepted OIG Referral

- OIG notified University of allegation, University:
  - Accepted referral of investigation
  - Consider offer for on-site help
  - Convene and brief investigation committee
- OIG provided referral letter with facts from OIG inquiry
As the responsible University official what must you consider and do?

- Review university’s policies
- Review existing evidence
- Inform subject, university counsel
- Consider Confidentiality and Conflict of Interests
- Consider impact of FOIA and Privacy Act
- IF REQUIRED; Initiate Inquiry: Convene and brief inquiry committee
- Conduct a timely, thorough, document-based inquiry
Facts After University Investigation

Concluded:

- Subject’s proposal was “misleading” and did not “discuss research in progress or to be done in the future.”

- Subject intended to use NSF award to support new research that was an outgrowth of the completed work.
Additional Mitigating Factors

- No evidence that the subject’s action was part of a purposeful, coordinated deception.

- Subject took responsibility for his actions and fully cooperated with us.

- Subject’s inexperience.
What Happened?

University Adjudication

- Concluded no misconduct, but “emphatically” agreed that the subject’s action was a serious deviation from accepted practices.”

- Concluded the subject had committed misconduct in falsifying a signature.

- Provided OIG with complete investigation report.
Additional University Actions

- University officials discussed the seriousness of the subject’s acts with him and warned him about serious repercussions of future misconduct.

- Subject’s department chair assigned to “carefully review” the subject’s next proposal.

- Ensured that new faculty members learn ethical requisites of proposal writing and develop mentoring by senior colleagues.
What did our Office do?

- Assessed report
- Determined Federal interest in pursuing case further
- Sought additional information from University about its investigation
- Conducted additional investigation to gather facts for Federal case
OIG considerations in assessing misconduct and making recommendations

- Substantive matter?
- Intent and seriousness of action
- Need to protect Federal interest
- Sufficiency of institution action sufficient
- Documentable evidence
- Need for correcting the record? Prospective impact?
- What were NSF actions in prior, similar cases?

We sent our Report of Investigation with recommendations to adjudicator (NSF’s Deputy Director)
Adjudication:
NSF’s finding and actions

- Letter of reprimand

- Misconduct in science (now research misconduct) for:
  - submitting a proposal for research already performed
  - causing the collaborator’s name to be signed on the certification page without consent

- 2-year certification requirement for subject

- 2-year certification by institutional representative
Case: Fraudulent Data

Allegation:

University learned a graduate student allegedly received Ph.D. based on a dissertation containing fabricated data.
As the responsible University official what must you consider and do?

- Review university’s policies
- Review existing evidence
- Inform subject, university counsel
- Consider Confidentiality and Conflict of Interests
- Consider FOIA and Privacy Act impact
- If Required, Initiate Inquiry: Convene and brief inquiry committee
- Conduct a timely, thorough, objective, document-based inquiry
Facts After University Inquiry

- Thesis research supported by an NSF award
- Graduate student did not contest the allegation
- Student withdrew thesis
- Committee concluded there was substance to case
What are the next steps for the University?

- Initiate Investigation
- Notify NSF Office of Inspector General (OIG)
- Provide inquiry report
- Accept deferral of investigation
- Consider offer for on-site help
- Convene and brief investigation committee

- most of these steps were not done
Facts After University Investigation

- Key chapter of the dissertation reported 3 kinds of measurements that were altered by cutting and pasting the spectra

- Information published in one paper and appeared in the draft of another
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TIME 01:58:47
DATE 00:00:00

AUTZ

RUN TIME 101.50

DEFAULT 0
NORMALIZATION METHOD USING AREA

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</tr>
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</table>
What Happened?

University Adjudication

- Rescinded student’s degree
- Sent letter of correction to journal
- Notified appropriate people (letters of recommendations) and organizations (where she taught)
- Provided OIG with complete investigation report
What did our Office do?

- Determined jurisdiction - Graduate student received a stipend for thesis work from her Ph.D. advisor’s NSF award
- Assessed report and documentary evidence
- Determined Federal interest in pursuing Federal case
- Sought additional information from investigating committee - Institution records relating to the subject and investigation; the original evidence of the fraudulent data
- Conducted additional investigation to gather facts for Federal case
Additional Investigative Facts

- Found student had not worked in the field since forfeiting degree

- Confirmed University conclusion that determinations, spectra, and analyses in thesis were fabricated
OIG considerations in assessing misconduct and making recommendations

- Substantive matter?
- Intent and seriousness of action
- Need to protect Federal interest
- Sufficiency of institution action sufficient
- Documentable evidence
- Need for correcting the record? Prospective impact?
- What were NSF actions in prior, similar cases?

We sent our Report of Investigation with recommendations to adjudicator (NSF’s Deputy Director)
What happened?

NSF Adjudication

- Student deliberately fabricated data
- We found misconduct
- 3-year certification requirement
- Assurance by supervisor or PI if on an NSF project

** The University also took appropriate action and rescinded the student’s Ph.D. and notified other appropriate institutions
Case: Misrepresentation of Credentials

Allegation:

PI’s submitted two proposals to NSF, both of which included resume of an individual intended to work on the proposal. The individual’s resume falsely claimed he had earned a B.S. in biology.
As the responsible University official what must you consider and do?

- Review university’s policies
- Review existing evidence
- Inform subject, university counsel
- Confidentiality and Conflict of Interests
- FOIA and Privacy Act considerations
- If required initiate Inquiry: Convene and brief inquiry committee
- Timely, thorough, fact-based, objective inquiry
The Facts

- Company informed us of the misrepresentation
- PI worked for a computer research company
- Company took steps to terminate the subject’s employment
- Subject resigned from his position
- OIG conducted the inquiry and investigation (firm was too small)
Facts After OIG Inquiry and Investigation

- Subject’s 25 years of experience were more important in assessing his qualifications than his alleged possession of a B.S. in an unrelated discipline
- Subject’s misrepresentation was not necessarily material to NSF’s decision
- Subject’s misrepresentation seriously violated professional standards for the preparation of proposals
- Subject lost long-held job as a direct result of misrepresentation to NSF
- OIG submitted Report of Investigation to NSF Adjudicator
What Happened?

Letter of reprimand

Finding of misconduct

For 1 year, subject certifies to OIG that all information in his proposals is correct
Case: Program Income

Allegation:

PI of an NSF conference grant failed to properly account for program income, improperly spent NSF funds, and violated COI rules.
Process

- University had audited the award prior to telling OIG.

- After reviewing the University’s internal audit report, we conducted an independent investigative financial review of the grant.
Facts After University’s Audit

- PI awarded a sub-contract to a company owned by the PI and his wife to:
  - coordinate the conference,
  - receive registration fees (program income), and
  - pay certain expenses not covered by the grant.

- The University had no advance knowledge of the Sub-K account was overdrawn which triggered an internal audit.

- PI did not report the program income to NSF or the University.
Facts After University Audit

- Through a settlement, the PI agreed to pay $22,453.65 to the University.
- Matter referred to state law enforcement
  - The COI violation may have violated
    - state Conflict of Interest laws
    - other state laws
Facts After OIG Audit and Investigation

- We determined the company received $124,955 in program income, of which we questioned $87,302.
- Payments to the company were questioned as were alcoholic beverages, gifts and other entertainment expenses.
- The University agreed with most of our findings and returned $63,652 to NSF.
After word

- The University surveyed PI’s and independently reviewed NSF grants to determine if any had potential for generating program income or participant support.

- The university created a task force to develop program income training modules. Completion of the modules is required by all new PI’s and current faculty.
After word

- Because of this case, we conducted a proactive review of 71 awards which had generated close to $1 million in conference fees.
- We continue to work with the institutions to resolve the issues. To date we have recouped $68,826 that was inappropriately used.
Case: Effort Reporting

Allegations

- PI of an NSF grant had improperly charged approximately $18,000 in labor and other indirect cost to the NSF grant.
- On at least two occasions, the PI billed NSF for work done for his private company.
- The lab was financially mismanaged with an operating deficit of $1.5 million.
We asked that the University conduct an audit of the labor cost associated with the NSF grant.

The audit report identified $95,606 in labor and associated indirect charges inappropriately charged to the NSF grant account due to poor financial management of the lab.

No intent or purposeful wrongdoing occurred.
Results

- The University returned $95,606
- Because the statute of limitation had run with regard to any criminal charges and because there was no evidence of intentional wrongdoing, we closed the case.
Silver Lining

- Prior to our involvement with this issue, the University had hired a CPA to oversee the lab’s funds, because they were concerned about the internal controls.

- When we came to the University with the allegation, the internal audit reviewed the numbers and agreed that something was wrong.
Another issue

- This is really an unmanaged COI in disguise. The University made the lab staff and PI track their time hourly, but did not audit the department.
- The way the internal auditors discovered that something was wrong was by looking at the timecards. The timecards did not match the movement of funds.
Case: False Statement and Fraud

Allegations

- Subject’s wife owned a private company which had an NSF Small Business Innovation Research (SBIR) Phase I grant
- Subject, a science professor, used his lab and graduate students to carry out work under the grant
Facts After OIG Investigation

- No work had been performed under the SBIR Phase I grant
- Most of the $99,300 went to pay salary to the subject and his wife or for fictitious expenses
- The final report submitted by the subject was copied verbatim from one of his student’s thesis
- Based on the report, NSF awarded the company an SBIR Phase II award, $99,974 of which had been disbursed
Result

- Recommended that NSF suspend the Phase II
- Referred the matter to the U.S. Department of Justice
- Subject repaid $198,975 and made an unrestricted donation to NSF
- Subject was voluntarily excluded from receiving Federal funds for a period of 3 years
- Subject plead guilty to 1 count of violating 18 U.S.C. §1001 – false statement and was later sentenced to 5 years probation, $15,000 fine
Case: Embezzling NSF Funds

Allegation

- A grants and contracts administrator abused his position.
- He falsely claimed she was a program participant and cause monthly disbursements to be paid to his wife
- He forged the signature of the project director and approved the payments in his role as the grant administrator
- He picked up the checks, made out to his wife and deposit then into HIS bank account
Facts after NSF Investigation

- The subject embezzled over $400,000 of NSF and other funds.
- By the time we were notified of the problem, the University had already notified local law enforcement. We worked with the local district attorney.
- The subject was charged with multiple counts of fraud, forgery, and revenue and tax violations.
Results

- The subject was convicted of embezzling $487,425 of which $415,500 were NSF funds.
- He was sentenced to 4 years in prison.
- He was ordered to pay restitution.
- OIG has recommended that NSF debar the administrator.
- The University determined that $1,206,314 should be returned to NSF.
Other issues

- The crime was discovered when the subject went on vacation. It was the only check picked up rather than sent.
- The University is cooperating with us to make sure that adequate internal controls are in place.