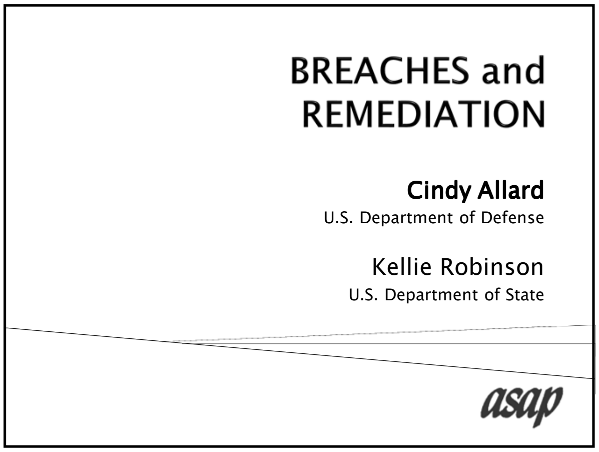

BREACHES and REMEDIATION

Cindy Allard
U.S. Department of Defense

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U.S. Department of State

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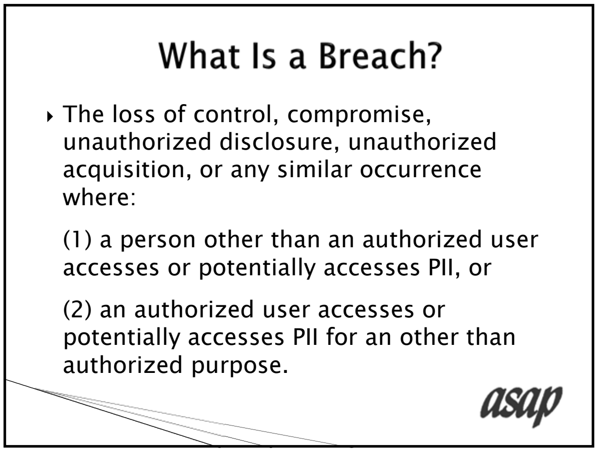

What Is a Breach?

- The loss of control, compromise, unauthorized disclosure, unauthorized acquisition, or any similar occurrence where:

  (1) a person other than an authorized user accesses or potentially accesses PII, or

  (2) an authorized user accesses or potentially accesses PII for an other than authorized purpose.

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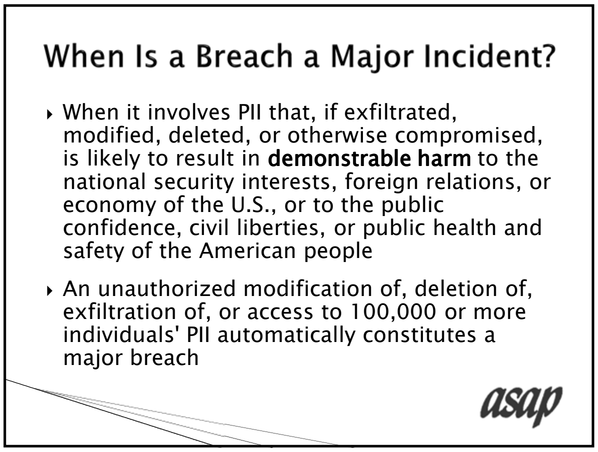

When Is a Breach a Major Incident?

- When it involves PII that, if exfiltrated, modified, deleted, or otherwise compromised, is likely to result in **demonstrable harm** to the national security interests, foreign relations, or economy of the U.S., or to the public confidence, civil liberties, or public health and safety of the American people
- An unauthorized modification of, deletion of, exfiltration of, or access to 100,000 or more individuals' PII automatically constitutes a major breach

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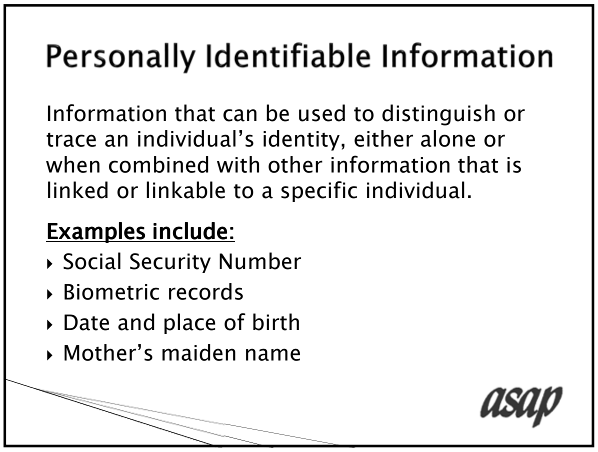

Personally Identifiable Information

Information that can be used to distinguish or trace an individual's identity, either alone or when combined with other information that is linked or linkable to a specific individual.

Examples include:

- Social Security Number
- Biometric records
- Date and place of birth
- Mother's maiden name

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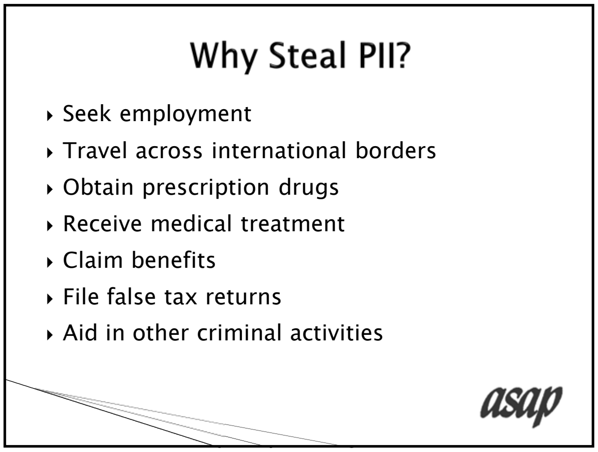

Why Steal PII?

- Seek employment
- Travel across international borders
- Obtain prescription drugs
- Receive medical treatment
- Claim benefits
- File false tax returns
- Aid in other criminal activities

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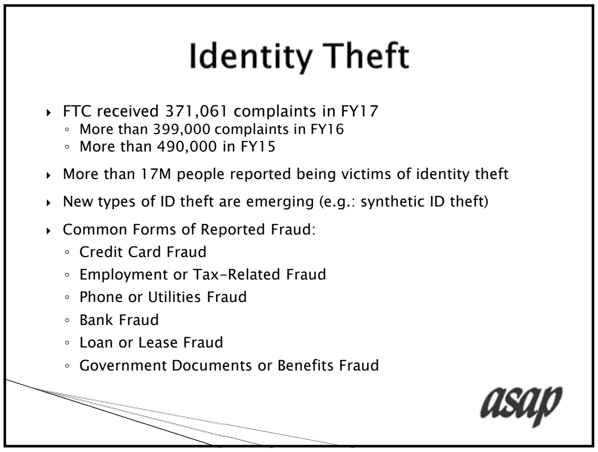

Identity Theft

- FTC received 371,061 complaints in FY17
  - More than 399,000 complaints in FY16
  - More than 490,000 in FY15
- More than 17M people reported being victims of identity theft
- New types of ID theft are emerging (e.g.: synthetic ID theft)
- Common Forms of Reported Fraud:
  - Credit Card Fraud
  - Employment or Tax-Related Fraud
  - Phone or Utilities Fraud
  - Bank Fraud
  - Loan or Lease Fraud
  - Government Documents or Benefits Fraud

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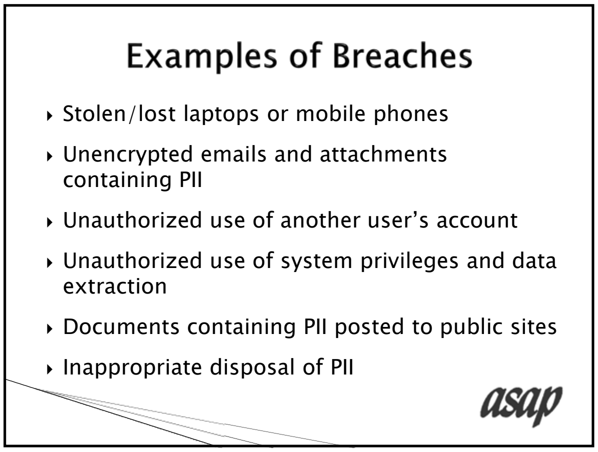
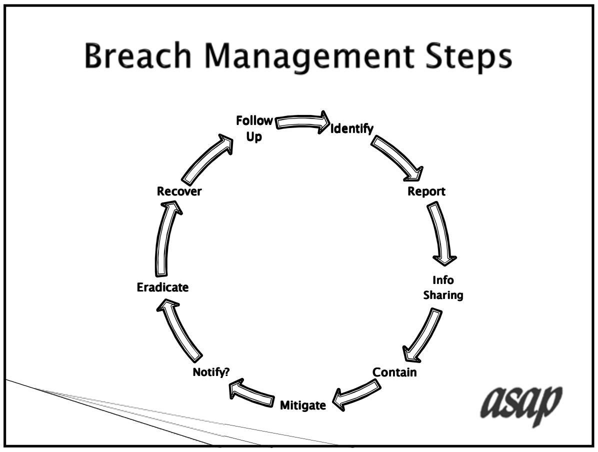


Examples of Breaches

- Stolen/lost laptops or mobile phones
- Unencrypted emails and attachments containing PII
- Unauthorized use of another user's account
- Unauthorized use of system privileges and data extraction
- Documents containing PII posted to public sites
- Inappropriate disposal of PII

We Have a Breach– What Happens Now?

You Need a Breach Response Plan.



Breach Management Steps

Follow Up

Identify

Report

Info Sharing

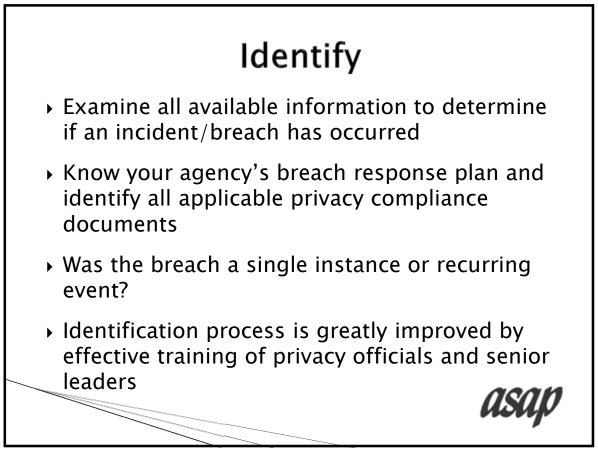
Contain

Mitigate

Notify?

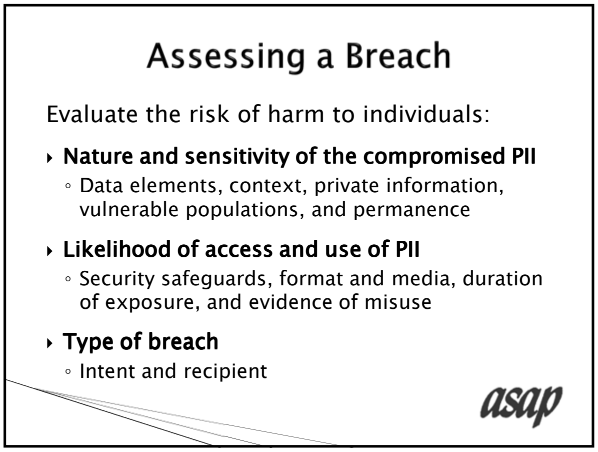
Eradicate

Recover



Identify

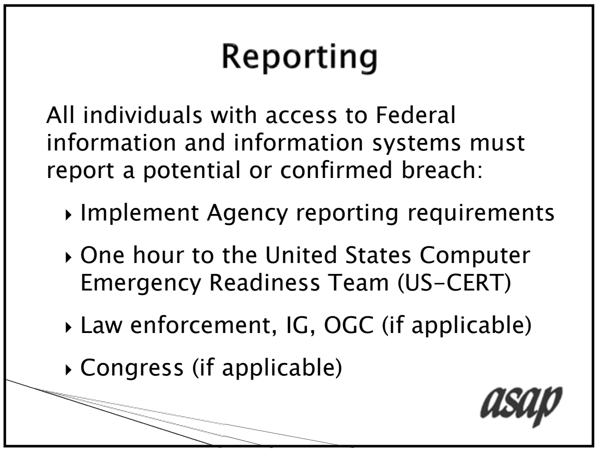
- Examine all available information to determine if an incident/breach has occurred
- Know your agency's breach response plan and identify all applicable privacy compliance documents
- Was the breach a single instance or recurring event?
- Identification process is greatly improved by effective training of privacy officials and senior leaders



Assessing a Breach

Evaluate the risk of harm to individuals:

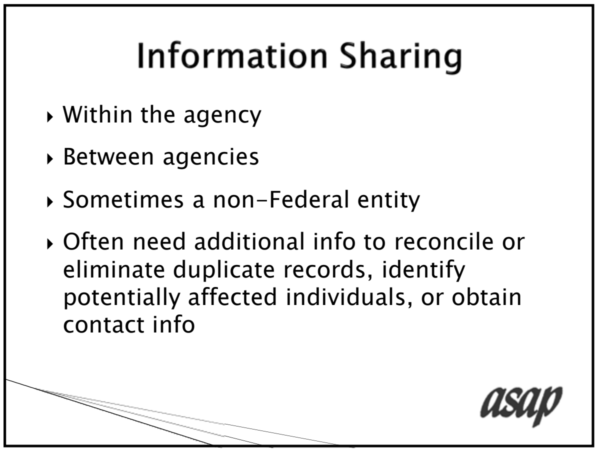
- **Nature and sensitivity of the compromised PII**
  - Data elements, context, private information, vulnerable populations, and permanence
- **Likelihood of access and use of PII**
  - Security safeguards, format and media, duration of exposure, and evidence of misuse
- **Type of breach**
  - Intent and recipient



Reporting

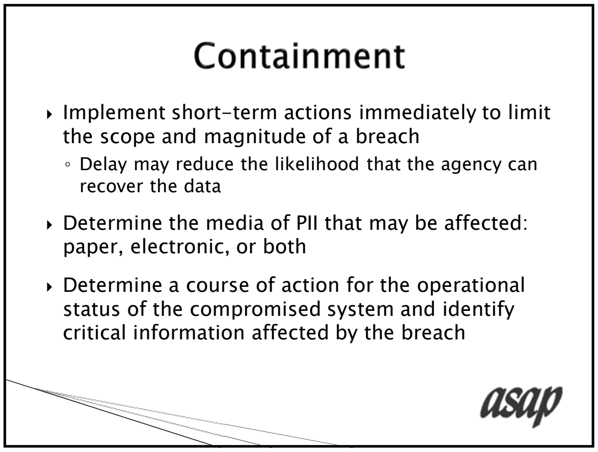
All individuals with access to Federal information and information systems must report a potential or confirmed breach:

- Implement Agency reporting requirements
- One hour to the United States Computer Emergency Readiness Team (US-CERT)
- Law enforcement, IG, OGC (if applicable)
- Congress (if applicable)



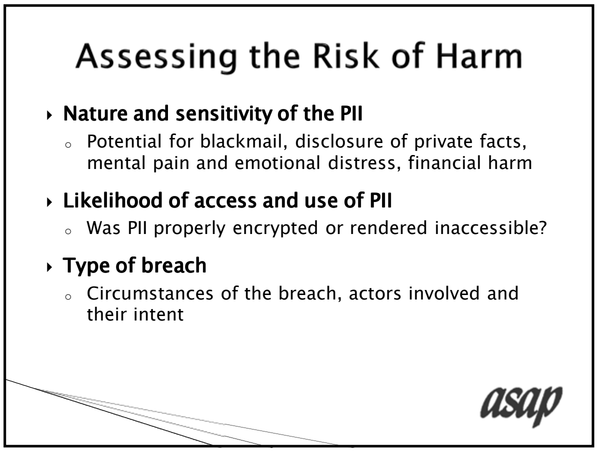
Information Sharing

- Within the agency
- Between agencies
- Sometimes a non-Federal entity
- Often need additional info to reconcile or eliminate duplicate records, identify potentially affected individuals, or obtain contact info



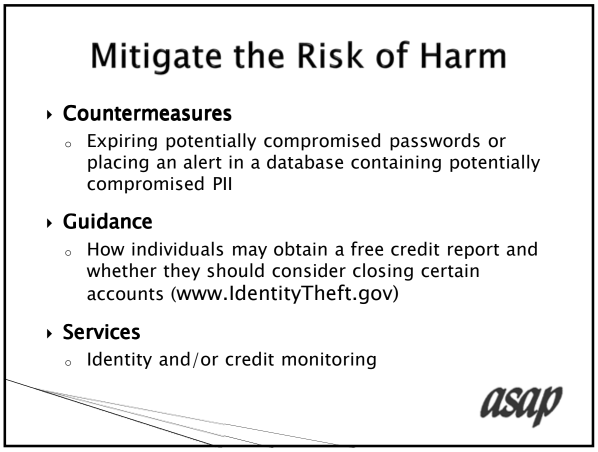
Containment

- Implement short-term actions immediately to limit the scope and magnitude of a breach
  - Delay may reduce the likelihood that the agency can recover the data
- Determine the media of PII that may be affected: paper, electronic, or both
- Determine a course of action for the operational status of the compromised system and identify critical information affected by the breach



Assessing the Risk of Harm

- **Nature and sensitivity of the PII**
  - Potential for blackmail, disclosure of private facts, mental pain and emotional distress, financial harm
- **Likelihood of access and use of PII**
  - Was PII properly encrypted or rendered inaccessible?
- **Type of breach**
  - Circumstances of the breach, actors involved and their intent



Mitigate the Risk of Harm

- **Countermeasures**
  - Expiring potentially compromised passwords or placing an alert in a database containing potentially compromised PII
- **Guidance**
  - How individuals may obtain a free credit report and whether they should consider closing certain accounts (www.IdentityTheft.gov)
- **Services**
  - Identity and/or credit monitoring

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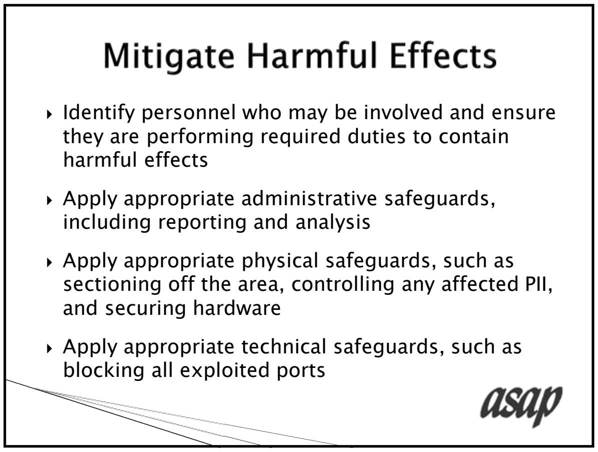

Mitigate Harmful Effects

- Identify personnel who may be involved and ensure they are performing required duties to contain harmful effects
- Apply appropriate administrative safeguards, including reporting and analysis
- Apply appropriate physical safeguards, such as sectioning off the area, controlling any affected PII, and securing hardware
- Apply appropriate technical safeguards, such as blocking all exploited ports

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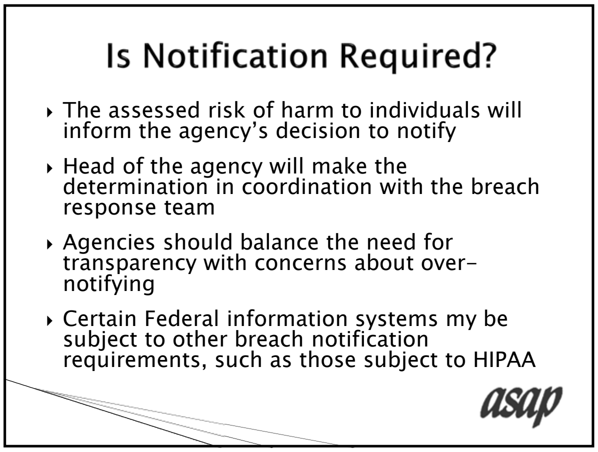

Is Notification Required?

- The assessed risk of harm to individuals will inform the agency's decision to notify
- Head of the agency will make the determination in coordination with the breach response team
- Agencies should balance the need for transparency with concerns about over-notifying
- Certain Federal information systems my be subject to other breach notification requirements, such as those subject to HIPAA

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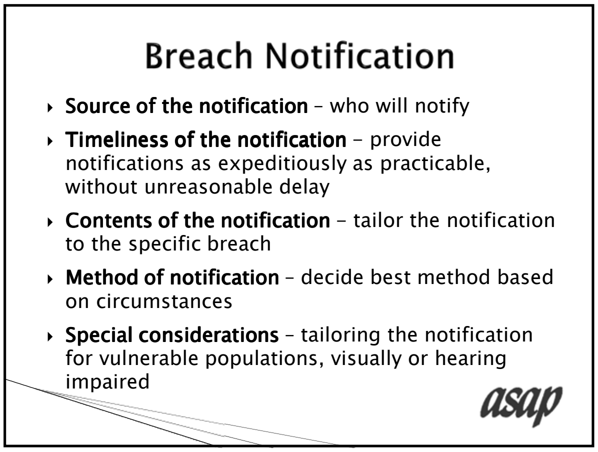

Breach Notification

- **Source of the notification** – who will notify
- **Timeliness of the notification** – provide notifications as expeditiously as practicable, without unreasonable delay
- **Contents of the notification** – tailor the notification to the specific breach
- **Method of notification** – decide best method based on circumstances
- **Special considerations** – tailoring the notification for vulnerable populations, visually or hearing impaired

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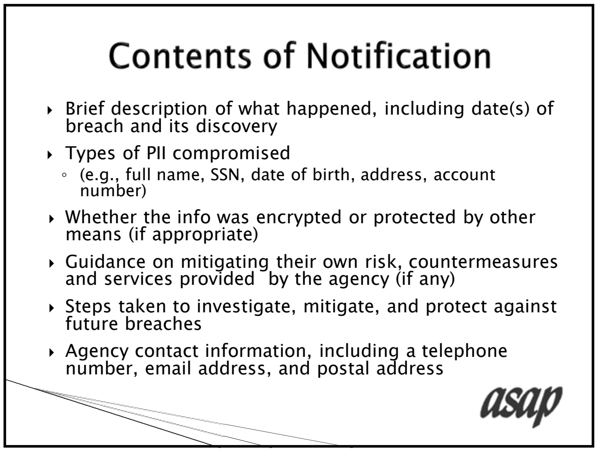

Contents of Notification

- Brief description of what happened, including date(s) of breach and its discovery
- Types of PII compromised
  - (e.g., full name, SSN, date of birth, address, account number)
- Whether the info was encrypted or protected by other means (if appropriate)
- Guidance on mitigating their own risk, countermeasures and services provided by the agency (if any)
- Steps taken to investigate, mitigate, and protect against future breaches
- Agency contact information, including a telephone number, email address, and postal address

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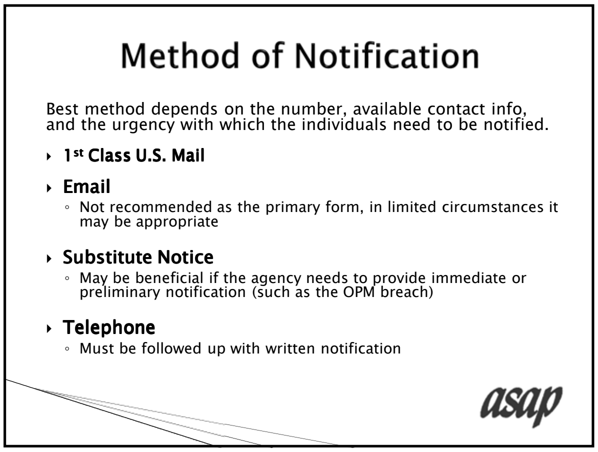

Method of Notification

Best method depends on the number, available contact info, and the urgency with which the individuals need to be notified.

- **1st Class U.S. Mail**
- **Email**
  - Not recommended as the primary form, in limited circumstances it may be appropriate
- **Substitute Notice**
  - May be beneficial if the agency needs to provide immediate or preliminary notification (such as the OPM breach)
- **Telephone**
  - Must be followed up with written notification

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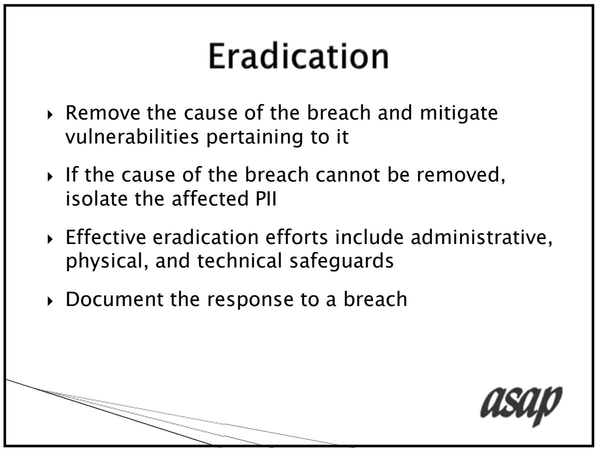
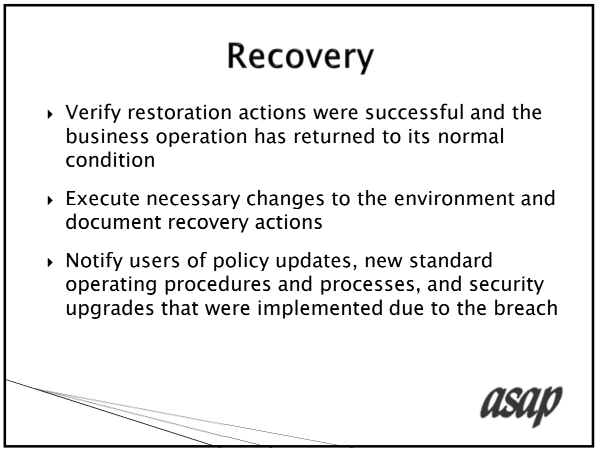


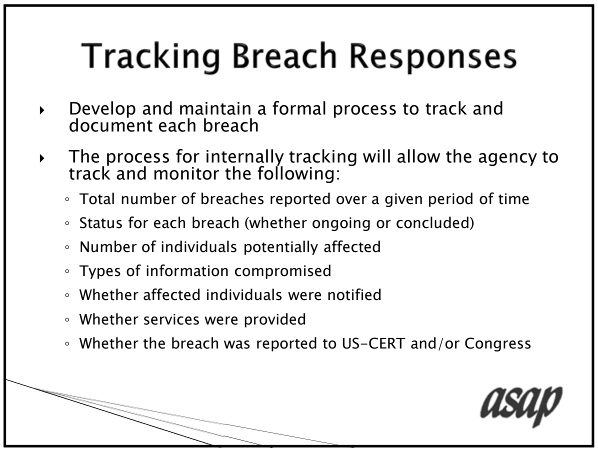
Eradication

- Remove the cause of the breach and mitigate vulnerabilities pertaining to it
- If the cause of the breach cannot be removed, isolate the affected PII
- Effective eradication efforts include administrative, physical, and technical safeguards
- Document the response to a breach



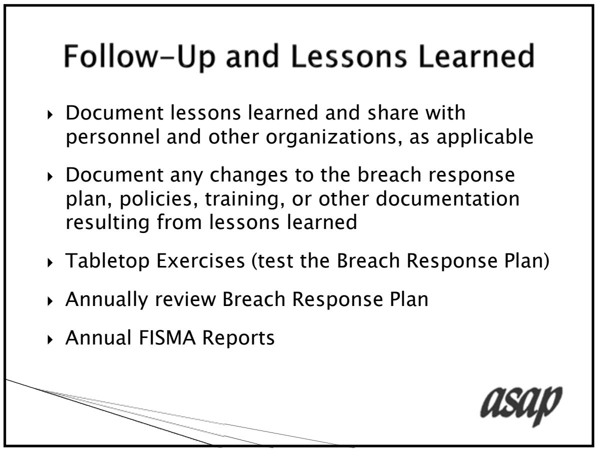
Recovery

- Verify restoration actions were successful and the business operation has returned to its normal condition
- Execute necessary changes to the environment and document recovery actions
- Notify users of policy updates, new standard operating procedures and processes, and security upgrades that were implemented due to the breach



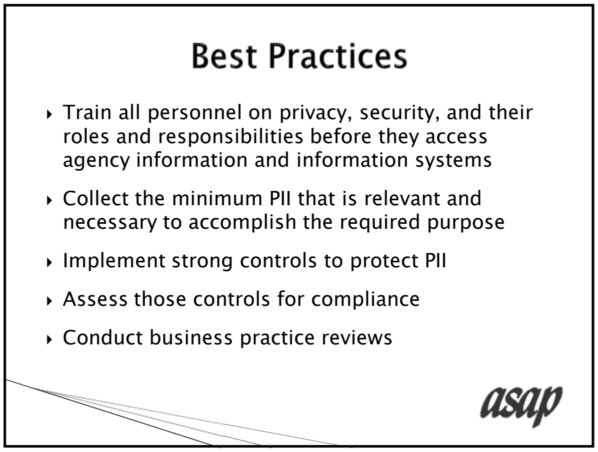
Tracking Breach Responses

- Develop and maintain a formal process to track and document each breach
- The process for internally tracking will allow the agency to track and monitor the following:
  - Total number of breaches reported over a given period of time
  - Status for each breach (whether ongoing or concluded)
  - Number of individuals potentially affected
  - Types of information compromised
  - Whether affected individuals were notified
  - Whether services were provided
  - Whether the breach was reported to US-CERT and/or Congress



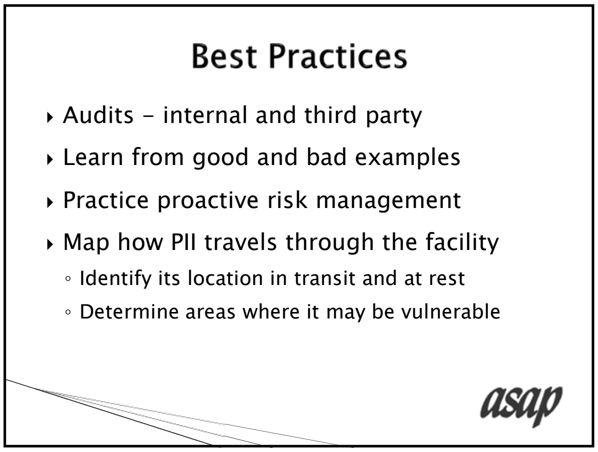
Follow-Up and Lessons Learned

- Document lessons learned and share with personnel and other organizations, as applicable
- Document any changes to the breach response plan, policies, training, or other documentation resulting from lessons learned
- Tabletop Exercises (test the Breach Response Plan)
- Annually review Breach Response Plan
- Annual FISMA Reports



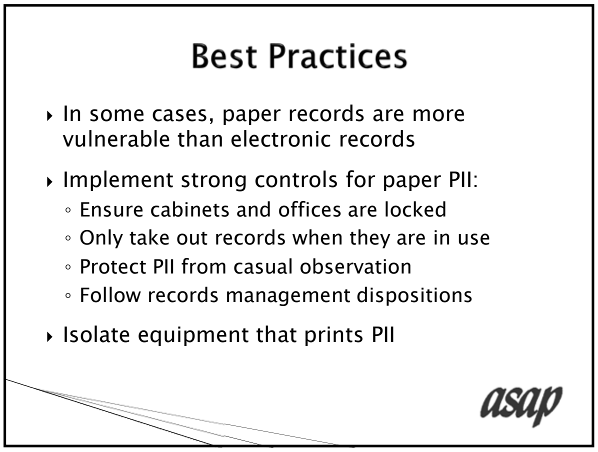
Best Practices

- Train all personnel on privacy, security, and their roles and responsibilities before they access agency information and information systems
- Collect the minimum PII that is relevant and necessary to accomplish the required purpose
- Implement strong controls to protect PII
- Assess those controls for compliance
- Conduct business practice reviews



Best Practices

- Audits - internal and third party
- Learn from good and bad examples
- Practice proactive risk management
- Map how PII travels through the facility
  - Identify its location in transit and at rest
  - Determine areas where it may be vulnerable



Best Practices

- In some cases, paper records are more vulnerable than electronic records
- Implement strong controls for paper PII:
  - Ensure cabinets and offices are locked
  - Only take out records when they are in use
  - Protect PII from casual observation
  - Follow records management dispositions
- Isolate equipment that prints PII

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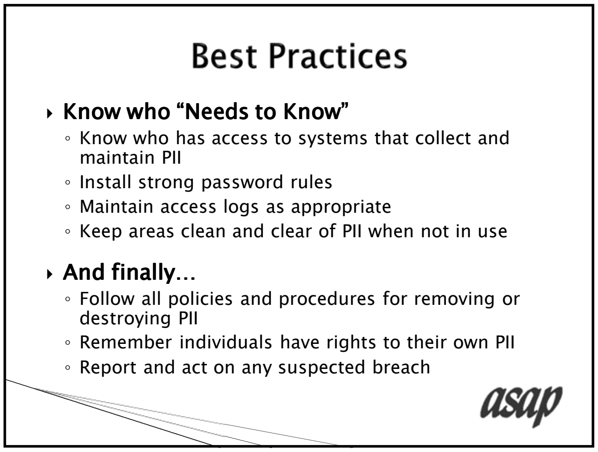

Best Practices

- **Know who “Needs to Know”**
  - Know who has access to systems that collect and maintain PII
  - Install strong password rules
  - Maintain access logs as appropriate
  - Keep areas clean and clear of PII when not in use
- **And finally…**
  - Follow all policies and procedures for removing or destroying PII
  - Remember individuals have rights to their own PII
  - Report and act on any suspected breach

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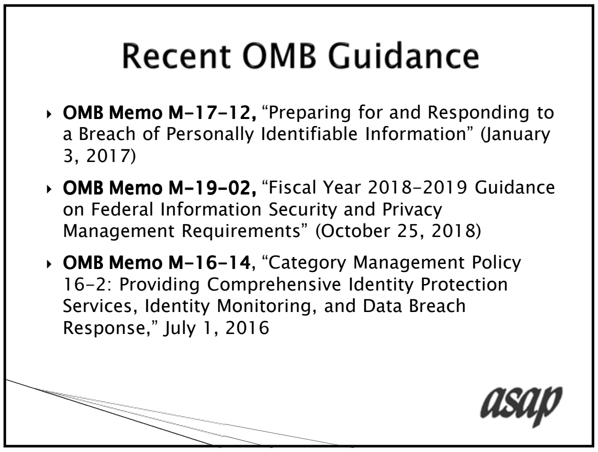

Recent OMB Guidance

- **OMB Memo M-17-12,** “Preparing for and Responding to a Breach of Personally Identifiable Information” (January 3, 2017)
- **OMB Memo M-19-02,** “Fiscal Year 2018-2019 Guidance on Federal Information Security and Privacy Management Requirements” (October 25, 2018)
- **OMB Memo M-16-14**, “Category Management Policy 16-2: Providing Comprehensive Identity Protection Services, Identity Monitoring, and Data Breach Response,” July 1, 2016

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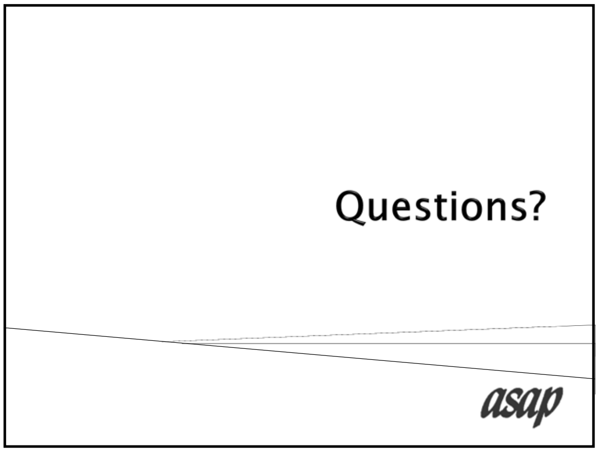

Questions?