

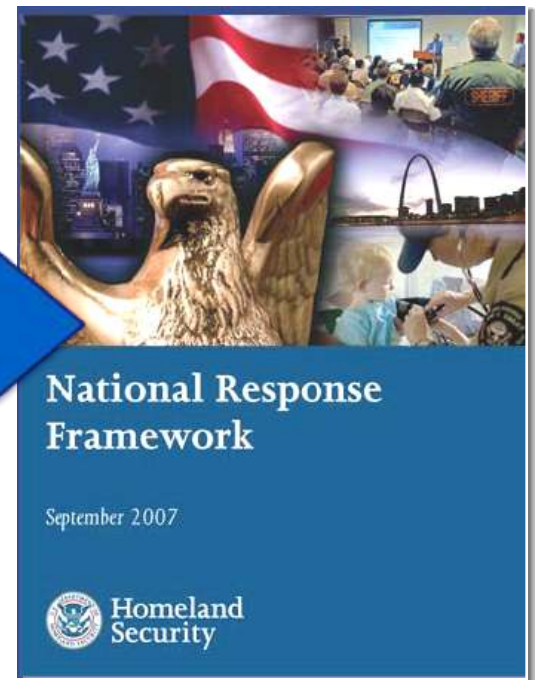
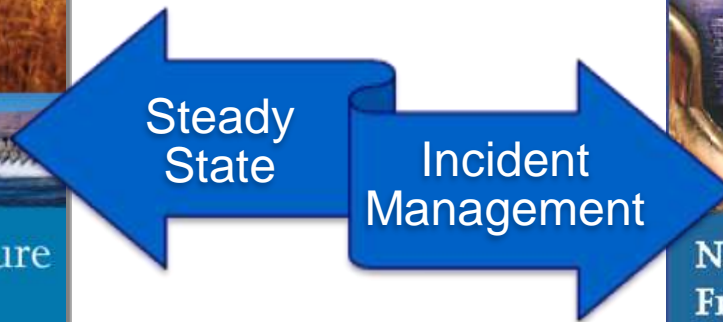
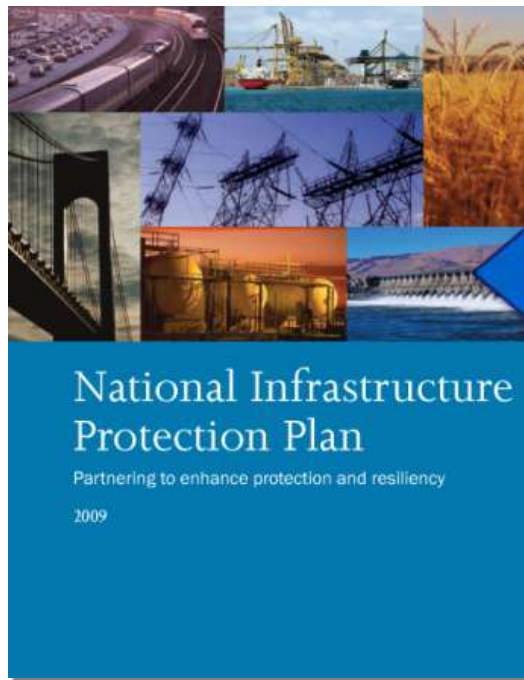
# *Higher Education for Infrastructure Protection*

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Homeland  
Security

# *Protecting the Nation's Critical Infrastructure*



# *Strategic Context for Infrastructure Protection/Resiliency*

Dynamic threat environment

- Natural Disasters
- Terrorists
- Accidents
- Cyber Attacks

A complex problem, requiring a national plan and organizing framework

- 18 Sectors, all different, ranging from asset-focused to systems and networks
- Outside regulatory space (very few security-focused regimes)
- 85% privately owned
- 100% in State and local jurisdictions

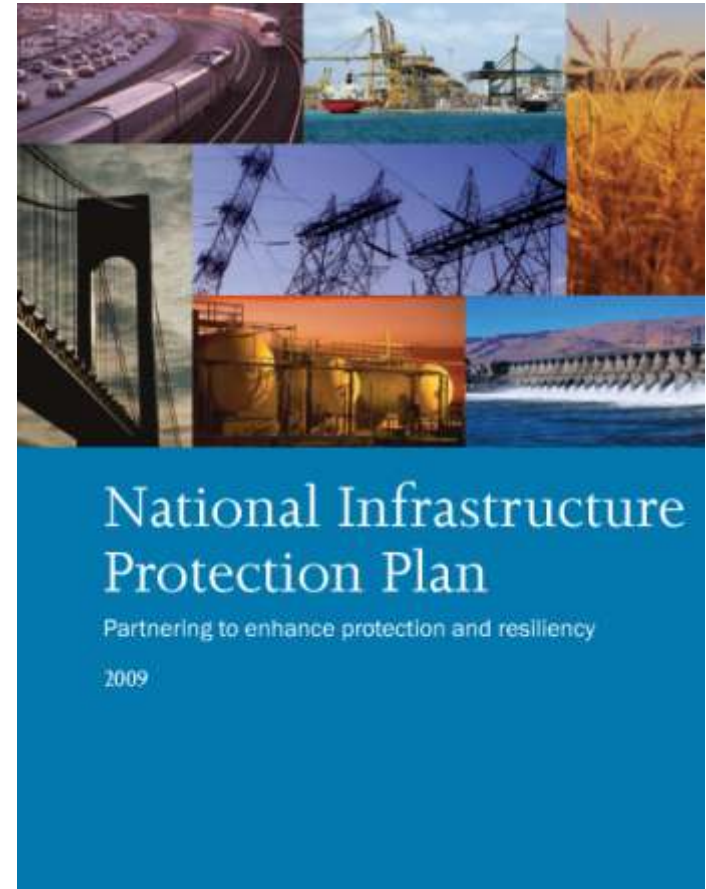
# *National Infrastructure Protection Plan*

Build a safer, more secure, and more resilient America by preventing, deterring, neutralizing, or mitigating the effects of deliberate efforts by terrorists to destroy, incapacitate, or exploit elements of our Nation's CIKR and to strengthen national preparedness, timely response, and rapid recovery of CIKR in the event of an attack, natural disaster, or other emergency.



# *National Infrastructure Protection Plan*

- A comprehensive plan and unifying structure for the government and the private sector to improve protection and resiliency of critical infrastructure and key resources, including
  - Partnership model & information sharing
  - Roles & responsibilities
  - Risk management framework
  - Authorities
  - Integration with other plans
  - Building a long-term program
  - Providing resources & prioritizing investments
- Contributes to both steady-state (non-incident) risk management and incident management
- Drives IP's programs/activities, guides those of
  - Other Federal agencies and departments
  - State, local, tribal, and territorial governments
  - CIKR owners and operators



# *CIKR and Incident Management*

**Pre-Incident**



**Incident**



**Post-Incident**



Prevention

Preparedness

Response

Recovery

Mitigation



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# *CIKR Higher Education Concept*

## **NIPP Chapter 6:**

- **Building and sustaining capabilities** to implement the NIPP involves a complex approach to the education and training effort that leverages existing accredited academic programs, professional certification standards, and technical training programs.
- **Working with a wide range of academic institutions** to incorporate CIKR protection into professional education programs with majors or concentrations; sponsors a post-graduate program at the Naval Postgraduate School.

- Create comprehensive infrastructure protection higher education programs to be offered in U.S. colleges and universities
- Foster development of a multi-disciplinary academic framework to support future workforce requirements needed to continue carrying out the critical infrastructure protection component of the homeland security mission
- Apply the CIKR Core Competency model in building the higher education programs

# *The Case for CIKR Higher Education*

- Infrastructure protection is new field that emerged with the creation of DHS in 2003
- A strategic infrastructure protection education system is needed to:
  - Provide an academic framework that clearly establishes critical infrastructure as a recognized and respected discipline
  - Establish multidisciplinary academic degree programs and standards
  - Build a community of infrastructure protection professionals to meet increasing requirements for government and the private sector
  - Continuously cultivate the next generation of infrastructure protection leaders
- An infrastructure protection educational system requires:
  - Surveys and assessments of existing programs
  - Analyses of unmet requirements and identification of requisite resources
  - Career development models mapping educational programs to career development stages

# *Higher Education Concept Plan*

Build towards the following multi-disciplinary degrees



- Associates
- Bachelors
- Masters
- Doctorate

Flexible programs to allow for either

- An infrastructure protection major, or
- An infrastructure protection concentration (component of a Homeland Security major or another area)

# *Higher Education Concept Plan*

An infrastructure protection educational and career development system requires

- Surveys of existing programs
- Assessments of current programs
- Analyses of unmet requirements and requisite resources
- Models of career development options
- Plans that map educational and training programs to career development stages
- Curricula for graduate-level courses
- Evaluation processes

# *Higher Education Concept and the CIKR Core Competency Model*

## Benefits

- Provides a consistent framework for all academic institutions
- Defines higher education requirements
- Organizes existing higher education efforts
- Identifies higher education gaps
- Sets forth a business case for higher education investments
- Establishes performance metrics



# *The Benefits of Higher Education Programs for CIKR Protection*

A consistent academic framework helps

- Prepare future leaders and professionals for the ever-evolving and complex CIKR threat environment
- Educate the workforce of the future
- Continuously improve partnerships and collaboration efforts between the government and private sectors
- Enhance knowledge of policy, economics, technology, communications, and other crucial competencies

# *Contact Information*

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# QUESTIONS





# Homeland Security