

# Office of Federal and State Materials and Environmental Management Programs

*Safety and Security in the Beneficial Applications  
of Nuclear Materials*

## ICRP Protection of the Environment

# ICRP Viewpoint Environment

- Adequate protection of humans will (almost always) ensure adequate protection of other species
- ICRP previously concerned with transfer of radionuclides through the environment in relation to protection of human beings
- Necessary to demonstrate, directly and explicitly, that the environment is being protected
- Fills a conceptual gap
  - Science to show if the environment is adequately protected
  - and methods to improve protection if required

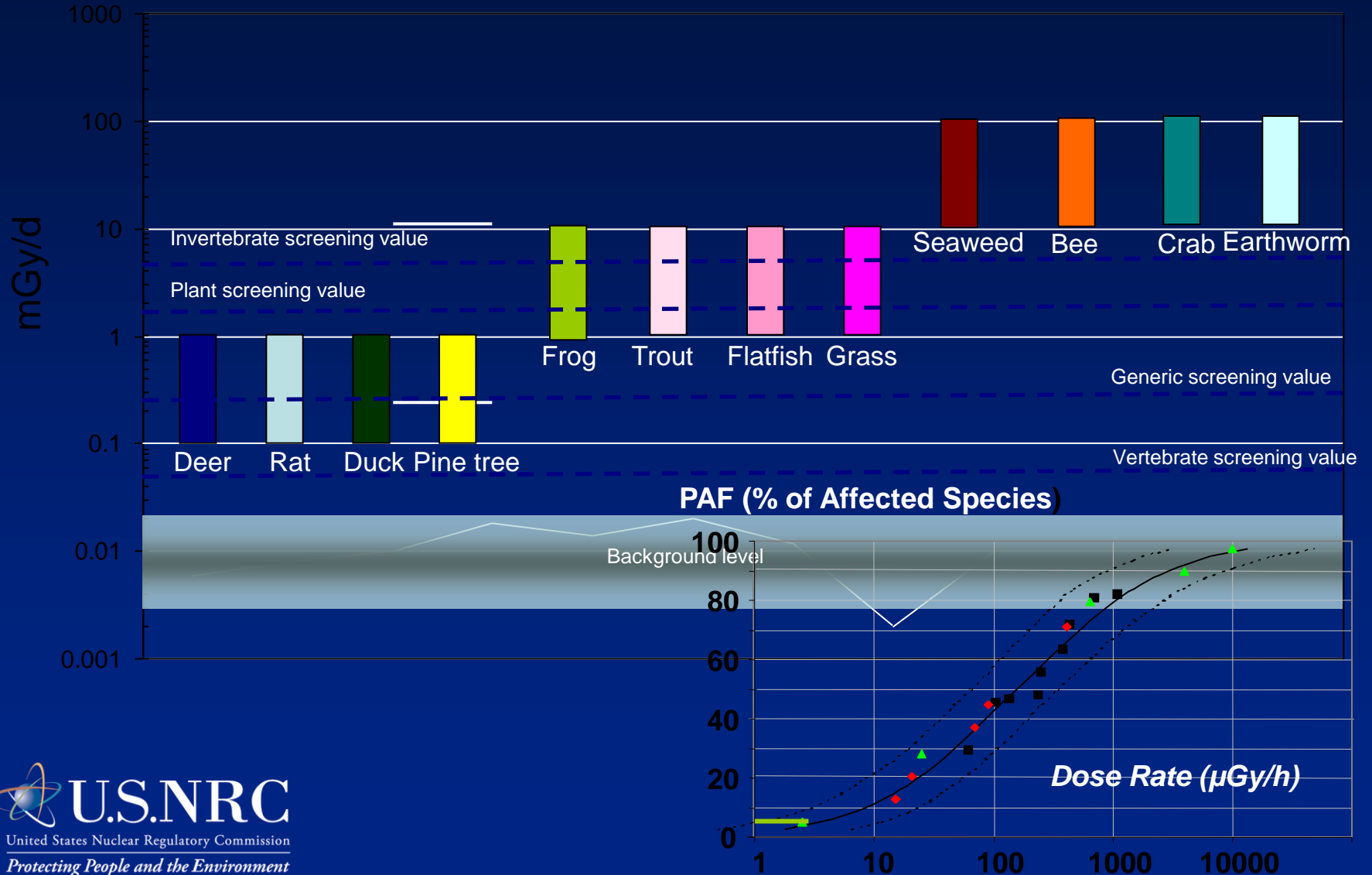


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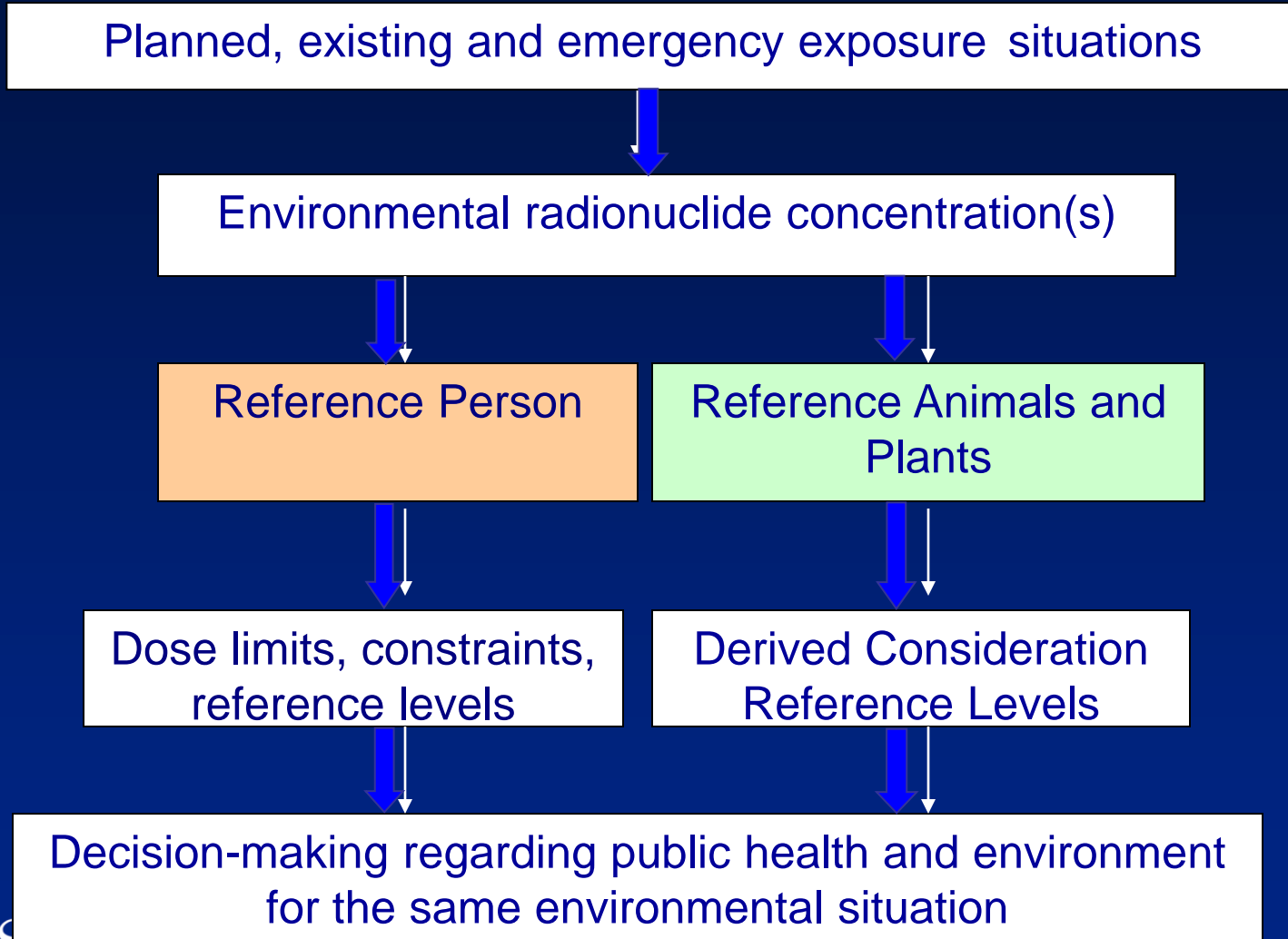


WILDLIFE GROUP	RAP
Large terrestrial mammals	Deer
Small terrestrial mammals	Rat
Aquatic birds	Duck
Amphibians	Frog
Freshwater pelagic fish	Trout
Marine fish	Flatfish
Terrestrial insects	Bee
Marine crustaceans	Crab
Terrestrial annelids	Earthworm
Large terrestrial plants	Pine tree
Small terrestrial plants	Wild grass
Seaweeds	Brown seaweed

# Derived Consideration Reference Levels, DCRLs



# Commonalities, RP (hum) and RP (env)



# NRC Public Meeting

- **Public Meeting on Groundwater Protection  
October 4, 2010**
- **Theme 1: Reassess NRC's Regulatory Framework  
for Groundwater Protection**
- **Asked participants a series of questions.**

# Questions

**Should NRC's programs be modified to ensure harmonization of the approaches we have taken to groundwater protection that are applied to different licensees under NRC regulations? (C.3.2)**

# Questions

**How should the NRC's programs accommodate or encourage industry initiatives that go beyond NRC requirements?**



# Questions

## How should NRC's programs address protection of the environment?

- **Should requirements be promulgated to require prompt remediation of unintended releases of radioactive liquids? (C.3.3)**
- **Should the NRC consider modifying Part 20 to address those portions of International Commission on Radiological Protection (ICRP) 103 related to environmental protection? (E.3.4)**

# Questions

**Should changes be made to the radiological effluent performance indicator in the Reactor Oversight Process to make it more reflective of performance in the area of plant releases, both planned and unplanned?**

**Should the performance indicator take into account public confidence in addition to the current risk-informed approach to radiation protection that verifies the effluent release program performance? (B.3.1)**

# Questions

**Should a policy statement be developed based upon NRC's existing regulations and guidance to address:**

- (1) protection of the environment within NRC's regulatory framework,**
- (2) NRC's expectations of licensees,**
- (3) the relationship to other regulatory schemes, and**
- (4) NRC's desire to work cooperatively with other Federal agencies and States in protecting the environment?**

# Questions

**Should NRC's regulatory framework be informed by experience or guidance developed or applied by the International Atomic Energy Agency, the international community or by other U.S. agencies, e.g., Department of Energy directives (DOE STD 1153) and activities?**

