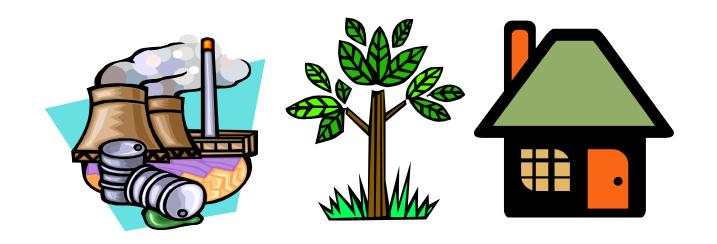
## ENVIRONMENTAL ASPECTS OF REAL ESTATE



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## OUTLINE OF PRESENTATION

- ❖ Due Diligence Checklist
- ❖ Environmental Aspects A to Z
- ❖ The Three W's

Waste

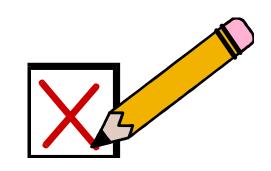
Wetlands

Wildlife

- Practical Tips
- What's Next

## DUE DILIGENCE FOR TRANSACTIONS & PERMITTING

- 1. Property Assessment
- 2. Title Review
- 3. Operations/Utilities/Zoning
- 4. Waste/Property Contamination
- 5. Wetlands/Floodplain/Water Bodies/Stormwater
- 6. Wildlife/Endangered Species
- 7. Documentation/Deeds/Easements/Permits
- 8. Community Impacts
- 9. Regulatory Compliance
- 10. Litigation History



### PROPERTY ASSESSMENT

- ✓ Property Designation, Parcels and Location
- ✓ Legal Description and Recorded Plans/Tax Records
- ✓ Past, Present and Proposed Uses
- ✓ Recent History (including proposals to develop or use)
- ✓ Wetlands on and near the Property
- ✓ Surface Waters on or near the Property
- ✓ Stormwater Discharges to or from the Property
- ✓ Tidelands, Waterways and Floodplains on or near Site
- ✓ Wildlife and Habitats on or near Site

## PROPERTY ASSESSMENT(cont'd)



- ✓ Special Flora or Fauna on Property (with special attention to Rare, Threatened, or Endangered)
- ✓ All Topography, Soils, Bedrock, Crops, Forests, Minerals
- ✓ Steep Slopes, Flood Prone Areas, Dams on or near Site
- ✓ All Landmarks, Historic Structures, or Archeological Sites
- ✓ Survey of Property to Show Current Conditions

### **UTILITIES**

- ✓ Examine structural integrity and capacity of water, sewer, gas, electric, telephone
- ✓ Determine whether needed new services or transmission facilities are available
- ✓ Examine sewage disposal and permit status for septic system or sewer
- ✓ Examine water supply and any new well, surface supply, withdrawal, or connection needed



### **ZONING**







- ✓ Identify certified copy of current, complete zoning bylaws or ordinances and related maps and guidelines
- ✓ Height limits, density limitations, building bulk, minimum lot size, lot coverage, building footprint, floor area, setbacks, parking and loading requirements, landscape standards, street and sidewalk improvement standards, design review standards, signage rules, open space, demolition delay, moratoria, grandfathered uses and buildings, and historic preservation approvals
- ✓ Ensure there is sufficient time allowed to obtain applicable zoning variances, changes, or permits

### ENVIRONMENTAL ASPECTS from A to Z

- Air Pollution
- Animal Feedlots
- Archeological Resources
- Brownfields
- Climate Change
- Coastal Zone
- Common Law
  - Nuisance
  - Negligence
  - Trespass
- Conservation Restrictions/Easements
- Dams/Reservoirs
- Drinking Water
- Earth Removal

- Emergency Management
- Eminent Domain/Condemnation
- Endangered Species
- Energy Efficiency/Conservation
- Energy Facility Siting
- Energy Transmission
- Environmental Impact Studies
- Erosion/Sedimentation Control
- Farms, Farming and Farmland
- Fish and Game
- Fisheries and Shellfish
- Floodplains
- Forests and Trees
- Ground water

## ENVIRONMENTAL ASPECTS from A to Z (cont'd)

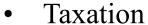
- Hazardous and Toxic Materials/Costs
- Historic and Cultural Sites/Structures
- Hazardous Waste Cleanups/Costs
- Hazardous Waste Management
- Housing Policy/Projects
- Indoor Pollution
  - Lead Paint
  - Radon
  - Urea Formaldehyde Insulation
  - No Smoking
  - Asbestos
  - Mold
  - Sick Buildings
- Mining and Minerals

- Outdoor Pollution
  - Noise
  - Lighting
  - Blasting
  - Odors
  - Vibration
- Open Space
- Parklands and Reservations
- Pesticides
- Petroleum Products
- Public Lands and Water Areas
- Radioactive Materials
- Regulatory Takings
- Scenic Resources

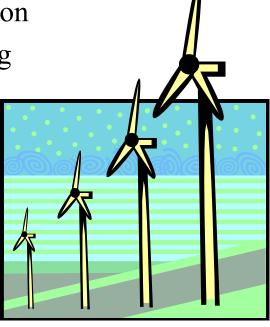
## ENVIRONMENTAL ASPECTS from A to Z (cont'd)

- Sewage and Septic Systems
- Smart Growth
- Solid Waste Facilities/Siting
- Solid Waste/Cleanup
- Storage Tanks
- Stormwater
- Streets, Roads and Highways
- Subdivision Control
- Telecommunications
- Tidelands and Waterways
- Toxic Substances
- Water Bodies
- Water Supply

- Water Pollution
- Water Rights
- Wetlands
- Wilderness
- Wildlife



Zoning





## THREE W'S

- ♣ This presentation will focus on the three areas, enacted as environmental, land use, and natural resource laws, where permits, standards, liabilities, or constraints can be fatal to real estate transactions, developments, or uses.
  - **4** Waste
  - **Wetlands**
  - **♣** Wildlife

# Waste: solid, hazardous & toxic waste law



## PROPERTY CONTAMINATION



- These words can spook buyers, sellers, banks, investors, landlords, tenants, and brokers
- Developers disappear from the landscape when they see signs of hazardous waste
- Business expansions are cancelled for the fear of discovering or disturbing past contamination
- Government agencies which acquire property by purchase, eminent domain, condemnation, tax title, gift or otherwise, get cold feet
- This fear of liability is natural, considering that innocent landowners can be liable for acquiring contaminated land even if they were not aware of the contamination at the time of acquisition and even if the contamination was legal

## **CONTAMINATION IS MANAGEABLE**

## The presence of contamination need not render property unusable or unsellable

- Someone needs to take charge and manage the problems
- Parties to a transaction can find many ways to "hold the deal together"

- Contaminated real estate can be bought and sold without unreasonable fear of liability
- It is very possible to make money buying and selling dirty property

## FIND CONTAMINATION

- It is naïve to buy a cheap assessment in the hope that it will be "clean"
- ASTM standards set a framework for conducting Phase I and Phase II environmental site assessments



### DO CAREFUL SITE ASSESSMENTS

## A properly done site assessment should include:

Permit and enforcement history

Prior waste disposal

Topography

Geologic setting

Surface and groundwater flows

Conditions of all buildings and structures

Building and utility layouts

Presence of tanks and piping

Prior uses, industrial, commercial or agriculture

## STRUCTURE TRANSACTIONS TO REDUCE RISK

Decisions to purchase or develop land should be based on the nature and scope of contamination, anticipated cleanup costs, activity and use limitations, and potential future liability

- Control liability
  - Delay the closing or acquisition until cleanup is complete
  - Deposit purchase money in escrow until the property or operation is clean
  - Personally do the cleanup, deducting costs from the purchase price
  - Contract cleanup duties between buyer and seller, using a formula
  - Provide clauses survive the closing
- Carve off the contaminated areas
  - Do not own or operate the dirty site, buy only the clean portion
  - Purchase or lease less than fee interest in property, such as an easement, the air rights, or the upper floors
  - Lease the clean parts of the site or building
  - Loan operating funds, taking back principal and interest

## **CONTRACT ESSENTIALS**

Condition of property

Liability releases

Warranties and representations

Escrow deposits

Purchase money holdbacks

Government liaison

Purchase price adjustments

Contingencies about future claims

Management of the cleanup

Reimbursement

Circulation of progress reports

Covenants not to sue

Government cleanup orders

formulas Cooperation on insurance claims

Arrangements against third party claims

Cooperation in defense

Cost-sharing arrangement

### FEDERAL WASTE LAWS



- Resources Conservation & Recovery Act (RCRA):
  - Disposal of Solid/Hazardous Waste
- Comprehensive
   Environmental Response
   Compensation & Liability Act
   (CERCLA):
  - Clean-up Hazardous Waste Sites
- Toxic Substance Control Act (TSCA):
  - Introduction of New or Existing Chemicals

## **RCRA**

- Cradle to Grave: regulates anyone who generates, transports, treats, stores, or disposes of hazardous waste
- Landowner Liability
  - Hazardous Substances: some courts have imposed liability on landowners for hazardous waste dumped on the property before their ownership.
    - Affirmative duty on purchases either to investigate the property before purchase or to accept property as is, complete with cleanup responsibilities. See *U.S. v. Price*,523 F.Supp. 1055 (D.N.J. 1981) and *U.S. v. Waste Industries*, 734 F.2d 159 (4<sup>th</sup> Cir. 1984)
  - Underground Storage Tanks (USTs): Requirements designed to prevent USTs from leaking hazardous wastes and petroleum products into the surrounding environment
    - 8 categories of standards to owners and operators of USTs:
      - Notification of Tank Existence
      - Leak Detection
      - Records Maintenance
      - Release Reporting
      - Corrective Action
      - Tank Closure
      - Financial Responsibility
      - Performance Standards for New Tanks



## **CERCLA**



- Superfund
- Gives broad authority for the federal government to initiate "response actions" to address or remedy releases or threatened releases of hazardous substances into the environment.
- Potentially Responsible Parties (PRPs)
  - 1. The current "owner or operator" of property on which hazardous substances have been released (or threat)
  - 2. A previous "owner or operator" of a contaminated property, when such ownership or operation existed or occurred at the time the hazardous substances were disposed of, released or stored on the property.
  - 3. The "person" who generates, owns or possesses the hazardous substances, or the person who arranged for the transport of such substances to a property where contamination occurred (referred to as "generator" or "arranger" liability).
  - 4. A person who accepted hazardous substances for transport to a disposal or treatment facility from which there has been a release or contamination ("transporter" liability).

## CERCLA (cont'd)

#### **Brownfields Revitalization Act**

- **Brownfields Definition**: abandoned, idled, or underused industrial and commercial sites where expansion or redevelopment is complicated by real or perceived environmental contamination
- Brownfield Act amends CERCLA
- Two main goals of Act:
  - Encourages brownfield redevelopment by providing federal liability relief to prospective purchasers of brownfield properties and to persons who undertake cleanup of these properties under state law
  - Provides funding to both state
     brownfield programs and to local
     governments who seek to return
     brownfields to productive use



#### **Bona Fide Prospective Purchaser**

- To qualify for exemption purchaser must show:
  - Disposal hazardous substance occurred prior to acquisition
  - Prior to acquiring property made inquiry about ownership and use of property
  - Provided all legally required notices with respect to discovery or release of hazardous substance
  - Exercised appropriate care with respect to hazardous substances found at facility
  - Provided full cooperation, assistance, and access to governmental or private parties performing response action
  - Complied with land use restrictions
  - Complied with government request for information
  - Has no corporate affiliation or family relationship with another person who is liabile

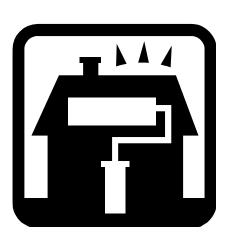
## **TSCA**

Controls Substances that are determined to cause unreasonable risk to public health or the environment

#### Lead Based Paints

 Disclosure Requirements: require disclosure of information on leadbased paint and lead-based paint hazards before the sale or lease of most housing built before 1978.





- **PCB** Regulates storage and disposal
  - "In or Near Commercial Buildings,"
     phase out or outright prohibition
  - Transformer Registration Requirement
    - Regulations on Servicing
  - Also regulates disposal and storage



#### **Alabama**

- Solid Waste Disposal Act Ala. Code , § 22-27-7
- Alabama Hazardous Wastes Management and
   Minimization Act of 1978 Ala. Code, §§ 22-30-1

#### Alaska:

Solid Waste Regulations - 18 AAC 60

#### • Arizona:

- Solid Waste Management Act Ariz. Rev. Stat. § 49-701 to 49-881
- Hazardous Waste Disposal Ariz. Rev. Stat. § 49-901 to 49-905

#### Arkansas:

- Arkansas Solid Waste Management Act Ark.
   Code Ann. § 8-6-201 to 222
- Arkansas Hazardous Waste Management Act of 1979 - Ark. Code Ann. § 8-7-201 to 277

#### California:

Hazardous Waste Control - Cal. Health & Safety
 Code § 25100 to 25257.1

#### Colorado:

- Hazardous Waste Laws Colo. Rev. Stat. Ann. §
   25-15-101 to 104
- State Hazardous Waste Citing Act Colo. Rev.
   Stat. Ann. § 25-15-200 to 219
- State Hazardous Waste Incinerator or Processor Siting Act – Colo. Rev. Stat. Ann. § 25-15-501 to 525
- Pollution Prevention Act of 1992 Colo. Rev.
   Stat. Ann. § 25-16.5-101 to 110

#### Connecticut:

- Solid Waste Management Conn. Gen. Stat.
   Ann. § 22a-207 to 256ee
- Solid Waste Management Services Act Conn.
   Gen. Stat. Ann. § 22a-257 to 292
- Hazardous Waste Management Conn. Gen.
   Stat. Ann. § 22a-114 to 134

#### • Delaware:

Hazardous Substance Clean-up Act - & Del.
 Code. Ann. § 9101 to 9120

#### • Florida:

- Solid Waste Management Act Fla. Stat. Ann. § 403.702
- Hazardous Waste Fla. Stat. Ann. § 403.72

#### Georgia:

- Georgia Hazardous Waste Management Act Ga.
   Code Ann. § 12-8-60 to 12-8-83.
- Georgia Comprehensive Solid Waste Management
   Act Ga. Code Ann. §§ 12-8-20 et seq.
- Regional Solid Waste Management Authorities Act
   Ga. Code Ann. §§ 12-8-50 et seq.

#### Hawaii:

- Solid Waste Haw. Rev. Stat. § 342G, 342H
- Hazardous Waste Haw. Rev. Stat. § 342J

#### Idaho:

- Hazardous Waste Management Act I.C. § 39-4401 to 4432
- Idaho Hazardous Substance Response Act I.C. § 39-7101 to 7115
- Idaho Solid Waste Facilities Act I.C. § 39-7401 to 7421

#### • Illinois:

 Hazardous and Solid Waste Recycling and Treatment Act - 30 Ill. Comp. Stat. 750/3-2

#### Indiana:

- Solid Waste Management Ind. Code § § 13-20-1-1 to 13-20-24-4, 13-21-1-1 to 13-21-14-9
- Hazardous Waste Management- Ind. Code § 13-22-1-1 to 13-22-14-3

#### Kansas:

 Solid and Hazardous Waste Act - Kan. Stat. Ann. § 65-3401

#### Kentucky:

- Solid Waste Ky. Rev. Stat. Ann. § 224.43-010 to 815
- Hazardous Waste Ky. Rev. Stat. Ann. § 224.46-012 to 870

#### • Louisiana:

- Louisiana Hazardous Waste Control Law La.
   Rev. Stat. Ann. § 30:2171
- Louisiana Waste Reduction Law La. Rev. Stat.
   Ann. § 30:2291



#### Louisiana:

- Solid Waste Recycling and Reduction Law La.
   Rev. Stat. Ann. § 30:2411
- Louisiana Solid Waste Management and Resource Recovery Law - La. Rev. Stat. Ann. § 30:2151

#### Maine:

 Maine Hazardous Waste, Septage and Solid Waste Management Act -Me. Rev. Stat. Ann. Tit. 38 § 1301.

#### Maryland:

Hazardous Materials and Hazardous Substances Md. Code Ann., Envir. § 7-101 to 709

#### Massachusetts:

- Hazardous Waste Management Act M.G.L. c.
   21C § 4
- Hazardous Waste Facility Siting Act M.G.L. c.
   21D § 1
- Oil & Hazardous Material Release Prevention Act
   M.G.L. c. 21E § 1
- Solid Waste Facilities M.G.L. c. 21H § 1

#### Michigan:

- Hazardous Waste Management Act -Mich. Comp.
   Laws Ann. § 324.11101 to 324.11153
- Solid Waste Management Act Mich. Comp. Laws
   Ann. § 324.11501 to 324.11550

#### Minnesota:

Waste Management Act - Minn. Stat. Ann. § 115A.01

#### Mississippi:

- Solid Waste Disposal Law Miss. Code Ann. § 17-17-27
- Nonhazardous Solid Waste Planning Act of 1991 Miss. Code Ann. § 17-17-201
- Mississippi Regional Solid Waste Management
   Authority Act Miss. Code Ann. § 17-17-301
- Mississippi Hazardous Waste Facility Siting Act of 1990 - Miss. Code Ann. § 17-18-1



#### • Missouri:

- Missouri Hazardous Waste Management Law Mo. Ann. Stat. §§ 260.350 to 260.430
- Solid Waste Management Law Mo. Ann. Stat. §§ 260.200 to 260.255

#### Montana:

- Montana Hazardous Waste Act Mont. Code Ann.
   § 75-10-401
- Montana Solid Waste Management Act Mont.
   Code Ann. § 75-10-201

#### Nebraska:

- Integrated Solid Waste Management Neb. Rev. Stat. § 13-2002
- Hazardous Waste Neb. Rev. Stat. §§ 81-1521.08 to 81-1521.23

#### Nevada:

- Collection and Disposal of Solid Waste Nev. Rev.
   Stat. Ann. §§ 444.440 to 444.620
- Hazardous Materials Nev. Rev. Stat. Ann. §§ 459.380 to 459.930

#### • New Hampshire:

- Hazardous Waste Management Program N.H.
   Rev. Stat. Ann. § 147-A:1 to 147-A:20
- Solid Waste Disposal and Management N.H.
   Rev. Stat. Ann. § 147:43 to 147:45, §149-M:1 to 149-M:31

#### New Jersey:

- Solid Waste Management Act N.J. Stat. Ann. § 13:1E-1
- Hazardous Waste N.J. Stat. Ann. § 13:1E-40

#### New Mexico:

- Hazardous Waste Act N.M. Stat. § 74-4-2
- Solid Waste Act N.M. Stat. § 74-9-1

#### New York:

- Industrial Hazardous Waste Management N.Y.
   Envtl. Conserv. Law §§ 27-0900 to 27-0926
- Litter and Solid Waste Control N.Y. Envtl.
   Conserv. Law §§ 27-1001 to 27-1019



#### North Carolina:

- Solid and Hazardous Waste Management N.C.
   Gen. Stat. Ann. § 130A-291
- Solid Waste Management Act of 1989 N.C. Gen.
   Stat. Ann. § 130A-309.01
- Brownfields Property Reuse Act of 1997 N.C.
   Gen. Stat. Ann. § 130A-310.30

#### North Dakota:

- Hazardous Waste Management N.D. Cent. Code § 23-20.3-01
- Solid Waste Management and Land Protection N.D. Cent. Code § 23-29-01

#### Ohio:

Solid and Hazardous Wastes - Ohio Rev. Code
 Ann. §§ 3734.01 to 3734.99

#### Oklahoma:

- Oklahoma Hazardous Waste Management Act Okla. Stat. Ann. Tit. 27A § 2-7-102
- Oklahoma Solid Waste Management Act Okla.
   Stat. Ann. Tit. 27A § 2-10-101

#### Oregon:

- Toxic Use Reduction and Hazardous Waste Reduction Act - Or. Rev. Stat. §§ 465.003 to 465.034
- Solid Waste Management Or. Rev. Stat. §§ 459.005 to 459.995

#### • Pennsylvania:

- Solid Waste Management Act 35 Pa. Stat. Ann. § 6018.101
- Hazardous Sites Cleanup Act 35 Pa. Stat. Ann. § 6020.101

#### • Rhode Island:

- Hazardous Waste Management Act R.I. Gen.
   Laws § 23-19.1-1 § 23-19.8-1
- Hazardous Waste Cleanup Good Samaritan Act -RI Gen. Laws
- Resource Recovery Corporation Act R.I. Gen. Laws § 23-19-1
- Industrial Property Remediation and Reuse Act R.I. Gen. Laws § 23-19.14-1

#### South Carolina:

- Hazardous Waste Management Act S.C. Code Ann. § 44-56-20
- Solid Waste Policy and Management Act S.C.
   Code Ann. § 44-96-10

#### South Dakota:

- Hazardous Waste Management S.D. Codified Laws § 34A-11-1
- Solid Waste Management S.D. Codified Laws § 34A-6-1.1

#### Tennessee:

- Solid Waste Disposal Act Tenn. Code Ann. § 68-211-101
- Hazardous Waste Management Act Tenn. Code
   Ann. §§ 68-212-101, 68-212-201

#### Texas:

- Solid Waste Disposal Act Tex. Health & Safety
   Code Ann. § 361.001
- Hazardous Substances Tex. Health & Safety
   Code Ann. § 501.001

#### • Utah:

- Solid and Hazardous Waste Act Utah Code Ann.
   § 19-6-101
- Hazardous Waste Facility Siting Act Utah Code
   Ann. § 19-6-201
- Hazardous Substance Mitigation Act Utah Code
   Ann. § 19-6-301
- Solid Waste Management Act Utah Code Ann. § 19-6-501
- Voluntary Cleanup Program Utah Code Ann. § 19-8-101

#### Vermont:

- Waste Management Vt. Stat. Ann. Tit. 10, §6601
- Toxic Use Reduction and Hazardous Waste
   Reduction Vt. Stat. Ann. Tit. 10, § 6623
- Brownfields Reuse and Environmental Liability
   Limitations Vt. Stat. Ann. Tit. 10, § 6641

#### • Virginia:

 Virginia Waste Management Act - Va. Code Ann. § 10.1-1400

#### Washington:

- Solid Waste Management-Reduction and Recycling - Wash. Rev. Code Ann. § 70.95.010
- Hazardous Waste Management Wash. Rev. Code
   Ann. § 70.105.005
- Hazardous Waste Cleanup-Model Toxics Control
   Act Wash. Rev. Code Ann. § 70.105D.010

#### West Virginia:

- Solid Waste Management Act W. Va. Code R. § 22-15-1
- Hazardous Waste Management Act W. Va. Code
   R. § 22-18-1
- Voluntary Remediation and Redevelopment Act W. Va. Code R. § 22-22-1

#### • Wisconsin:

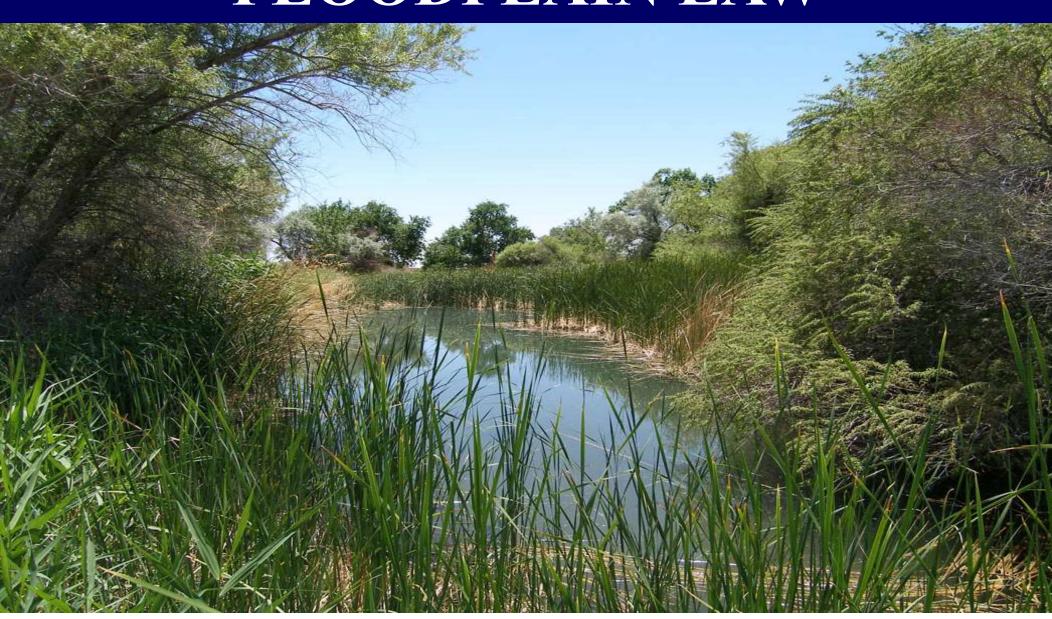
- Solid Waste Reduction, Recovery and Recycling - Wis. Stat. § 287.01
- Hazardous Waste Management Wis.
   Stat. § 291.001

#### • Wyoming:

- Solid Waste Management Wyo. Stat.
   Ann. § 35-11-501
- Integrated Solid Waste Planning Wyo.
   Stat. Ann. § 35-11-1901



# WETLANDS AND FLOODPLAIN LAW



## WILL THE WORK AFFECT A PROTECTED RESOURCE?

#### **Protected Resources Include:**

<u>WETLANDS</u> = areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support (and normally does support) prevalent vegetation typical of saturated soil conditions (33 CFR § 328 (b) )

- Vegetated Wetlands (marshes, swamps, bogs)
- Coastal Wetlands (salt marshes, tidal flats, estuaries, dunes, beaches)

#### **FLOODPLAINS**

- Areas Prone to Flooding
- Areas Affected by the Tide or Coastal Flowage



CAUTION: Working definitions of wetlands and floodplains are merely rules of thumb and may vary between different statutes and bylaws.

#### **OTHER WATER RESOURCES**

Rivers, Streams, Lakes, Ponds, Ocean

## DOES THE PROJECT AFFECT PUBLIC INTERESTS IN THE RESOURCES?

•Flood Control

Public or private water supply

Recreation

Shellfish

Preventing pollution

•Ground water supply

Storm damage prevention

Navigation

Aquaculture

Agriculture

Fisheries

Wildlife and its habitat

Other

Example: In English, wetlands are natural sponges.



Wetlands store surface water and release it during times of low flow. They absorb flood waters and reduce damage elsewhere.

They are also natural food factories and produce nutrients.

They are also natural housing.

## FEDERAL WETLANDS AND FLOODPLAIN PROTECTION



- 1. Army Corps of Engineers Section 404 Permits
- 2. Rivers and Harbors Act 1899
  - Regulates dredging, structures and water course changes (§ § 9, 10, 13)
- 3. Executive Orders on Wetlands and Floodplains
- 4. FEMA Flood Insurance Program
- 5. Clean Water Act Storm Water Regulations
- 6. Superfund/ Brownfields
- 7. Endangered Species Act

## JURISDICTIONAL WETLANDS "WATERS OF THE UNITED STATES"

#### EPA Post Rapanos Guidance

#### Jurisdictional Waters:

- Traditional navigable waters
- Wetlands adjacent to traditional navigable waters
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries flow year-round or have continuous flow at least seasonally (e.g., typically three months)
- Wetlands that directly abut such tributaries



# JURISDICTIONAL WETLANDS "WATERS OF THE UNITED STATES" (cont'd)

- Jurisdiction based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:
  - Non-navigable tributaries that are not relatively permanent
  - Wetlands adjacent to non-navigable tributaries that are not relatively permanent
  - Wetlands adjacent to but that do not directly abut a relatively permanent nonnavigable tributary
- Significant Nexus Anaylsis:
  - Assesses the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters - includes consideration of hydrologic and ecologic factors



# § 404 PERMITS



# No discharge of dredged or fill material may be permitted if:

- A practicable alternative exists that is less damaging to the aquatic environment or
- The nation's waters would be significantly degraded.

# Must show that you have:

- Taken steps to avoid wetland impacts;
- Minimized potential impacts on wetlands; and
- Provided compensation for any remaining unavoidable impacts.

# Permit Exemptions §404(f):

- Routine, ongoing farming,
   ranching, forestry activities
- Plowing, seeding, cultivating,
   harvesting food, fiber, and forest
   products
- Upland soil and water conservation practices.
- Construction and maintenance of irrigation ditches, farm, stock ponds, farm and forest roads (best management practices)
- Maintenance of structures, such as dams, dikes, and levees, drainage ditches

# § 404 PERMITS (cont'd)

#### • Two Permits:

- <u>Individual</u> potentially significant impacts
  - Process: Standard permit application form, notice and comment, interagency consultation, "Public Interest" review
- General minimal adverse effects
  - issued on a nationwide regional, or State basis for particular categories of activities
  - Valid for 5 years

# State Water Quality Certification:

 §401: permit applicant must have water quality certification from state indicating that proposed activity will comply with state water quality criteria

#### • EPA Veto:

 §404(c): "unacceptable adverse effect on municipal water supplies, shellfish beds and fishery area...wildlife, or recreational areas."



# STORMWATER PROGRAM

#### "Point Sources" under NPDES

- Construction activities
- Industrial activities
- Municipal separate storm sewer systems (MS4s)

#### Construction Activities:

- Construction site operators engaged in clearing, grading, and excavating activities that disturb 1 acre or more, including smaller sites in a larger common plan of development or sale, must obtain coverage under an NPDES permit for their stormwater discharges
- Construction General Permit (CGP):
  - NOI requirements
  - Prohibition on discharging non-storm water
  - Requirements for handling hazardous substance releases that exceed reporting requirements
  - Stormwater pollution prevention plan
  - Site inspection requirements
- Oct. 19, 2009, EPA proposed extending the 2008 CGP by one year to June 30, 2011 to allow time to properly incorporate into a new CGP, the national clean water standards, known as effluent limitation guidelines, for the construction and development industry that will be published by Dec. 1, 2009



# STORMWATER PROGRAM (cont'd)



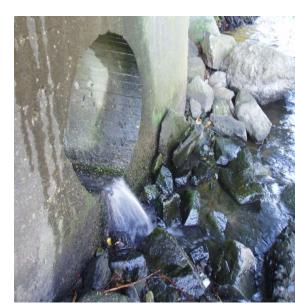
#### Industrial Activities:

- 10 categories of industrial activity that require NPDES permit
  - Facilities subject to federal stormwater effluent discharge standards
  - Heavy manufacturing
  - Coal and mineral mining and oil and gas exploration and processing
  - Hazardous waste treatment, storage, or disposal facilities
  - Landfills, land application sites, and open dumps with industrial wastes
  - Metal scrapyards, salvage yards, automobile junkyards, and battery reclaimers
  - Steam electric power generating plants
  - Transportation facilities that have vehicle maintenance, equipment cleaning, or airport deicing operations
  - Treatment works treating domestic sewage with a design flow of 1 million gallons a day or more
  - Light manufacturing

# STORMWATER PROGRAM (cont'd)

#### • **MS4s**:

- A conveyance or system of conveyances that is
  - Owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.;
  - Designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.);
  - Not a combined sewer; and
  - Not part of a Publicly Owned Treatment Works (sewage treatment plant).
- Need NPDES permit and required to develop/implement a stormwater management program to reduce the contamination of stormwater runoff and prohibit illicit discharge



# RECENT CHANGES TO WETLAND POLICY



• Earlier this year the Obama administration called on Congress to clarify the Clean Water Act's scope. The Environment and Public Works Committee responded with a bill that replaces the phase "navigable waters" with "waters of the United States" and "reaffirms Federal Jurisdiction over all waters of the United States, as the Clean Water Act was applied and interpreted" prior to *SWANCC* and *Rapanos*.

#### \* Alabama:

• Coastal Area Management Act – Ala. Code §§ 9-7-10 to 9-7-22

#### \*Alaska:

- Coastal Management Act Alaska Stat. §§ 46.39
   & 46.40
- Alaska Land Act Alaska Stat. §§ 38.05.070 to 075

#### **&** California:

• Coastal Act - Cal. Pub. Res. Code §§ 30000 to 30900.

#### **\*** Connecticut:

- Inland Wetlands and Watercourses Act Conn. Gen. Stat. Ann. §§ 22a-36 to 22a-45
- Tidal Wetlands Act Conn. Gen. Stat. Ann. §§ 22a-28 to 22a-35
- Connecticut Coastal Management Act Conn, Gen, Stat. Ann. §§ 22a-90 to 22a-112
- Coastal Structure and Dredging Act Conn. Gen. Stat. Ann. §§ 22a-359 to 22a-363f



#### **Delaware:**

- Wetlands Act -Del. Code Ann. tit. 7, §§ 6601 to 6620
- Beach Preservation Act Del. Code Ann. tit. 7, §§ 6801 to 6812
- Coastal Zone Act Del. Code Ann. tit. 7, §§ 7001 to 7013

#### \*Florida:

- Beaches and Shores Preservation Act Fla. Stat. §§ 161.001 to 161.45
- Coastal Zone Protection Act Fla. Stat. §§ 161.52 to 161.58
- Florida Environmental Reorganization Act of 1993 Part IV of Ch. 373, Fla. Stat.
- Florida Air and Water Pollution Control Act Ch. 403, Fla. Stat.



#### **❖** Georgia:

- Coastal Marshlands Protection Act Ga. Code Ann. §§ 12-5-280 to 12-5-297
- Shore Protection Act Ga. Code Ann. §§ 12-5-230 to 12-5-248

#### \* Hawaii:

• Coastal Zone Management Act - Haw. Rev. Stat. §§ 205A-1 to 205A-49

#### **❖** Indiana:

• Wetland Regulations – 13 Ind. Admin. Code 18-22-1

#### \* Iowa:

• Wetlands Act of 1990 – Iowa Code Ann. § 456B.1

#### \*Louisiana:

- State and Local Coastal Resources Management Act
- La. Rev. Stat. Ann. § 49:214.21 et seq
- Mitigation of Coastal Wetlands Losses La. Rev. Stat. Ann. § 49:214.41

#### **\***Maine:

- Natural Resources Protection Act Me. Rev. Stat. Ann tit. 38, §§ 480-A to 480-Z
- Mandatory Shoreline Zoning and Subdivision Control Act - Me. Rev. Stat. Ann tit. 38, §§ 435 to 447
- Natural Resources Protection Act Me. Rev. Stat. Ann tit. 38, §§ 481 to 490
- Coastal Management Policies Act Me. Rev. Stat. Ann tit. 38, §§ 1801 to 1803
- Coastal Barrier Resources System Act Me. Rev. Stat. Ann tit. 38, §§ 1901 to 1905

#### \* Maryland:

- Nontidal Wetlands Protection Act Md. Nat. Res. Code Ann. secs. 16-1201
- Tidal Wetlands Act Md. Envir. Code Ann. §§ 1-101 to 1-503
- Chesapeake Bay Critical Area Act Md. Nat. Res. Code Ann. secs. 8-1801-1816
- Coastal Facilities Review Act Md. Envir. Code §§ 14-501 to 14-511



#### \* Massachusetts:

- Wetlands Protection Act G.L. c. 131, §§ 40, 40A
- Coastal Wetlands Restriction Act G.L. c. 130, § 105
- Inland Wetlands Restriction Act G.L. c. 131, § 40A
- Public Waterfront Act MGL c. 91
- Coastal Zone Management Laws G.L. c. 6A,  $\S$  2-7; c. 21A,  $\S$  4A

#### \* Michigan:

- Wetland Protection Act Mich. Comp. Laws Ann. § 324.30301 et seq
- Shorelands Protection and Management Mich. Comp. Laws Ann. § 324.32301 et seq

#### \* Minnesota:

•Wetland Conservation Act - Minn. Stat. Ann. § 103G.221 to 103G.2372

#### **Mississippi:**

- Coastal Wetlands Protection Act Miss. Code Ann. §§ 49-27-1 to 49-27-71
- Marine Resources Law Miss. Code Ann. §§ 57-15-1 to 57-15-17

#### **❖**New Hampshire:

- Fill and Dredge in Wetlands N.H. Rev. Stat. Ann. §§ 482-A:1
- Surface Water Permit Program N.H. Rev. Stat. Ann. §§ 485-A:2

#### \* New Jersey:

- Freshwater Wetlands Protection Act N.J.Stat. Ann. 13:9B-1 et seq
- Coastal Wetlands Protection Act N.J. Stat. Ann. § 13:9A1-10



#### \* New York:

- Freshwater Wetlands Act N.Y. Envtl. Conserv. Law §§ 24-0101 to 1305
- Tidal Wetlands Act N.Y. Envtl. Conserv. Law §§ 25-0101 to 0601
- Waterfront Revitalization of Coastal Areas & Inland Waterways Act N.Y. Exec. Law §§ 910 to 923

#### \* North Carolina:

- Coastal Area Management Act N.C.Gen Stat. Ann. § 113A-100-129
- Dredge and Fill Act N.C. Gen. Stat. Ann. §113-229, 230

#### \* North Dakota

• Wetlands Law - N.D. Cent. Code §§§ 61-32-03, 07, 08

#### **Ohio:**

• Water Pollution Control Act/Isolated Wetlands - Ohio Rev. Code Ann. § 6111.01

#### \* Oregon:

- Fill and Removal Act Or. Rev. Stat. Ann. §196.800 to 196.990
- Mitigation Banking Act of 1987 Or. Rev. Stat. Ann. §196.600 to 196.665
- Oregon Ocean Resources Management -Or. Rev. Stat. Ann. §§ 196.405 to 196.580
- Comprehensive Land Use Planning Coordination Act
- Or. Rev. Stat. Ann. §§ 197.005 to 197.860

#### **❖**Pennsylvania:

- The Clean Streams Law 35 Pa. Cons. Stat. Ann. §§ 691.1 et seq.
- The Dams Safety and Encroachments Act 32 Pa. Cons. Stat. Ann. §§ 693.1 et seq.

#### \*Rhode Island:

- Freshwater Wetlands Act R.I. Gen .Laws §§ 2-1-18 to 2-1-24
- Coastal Resources Management Act R.I. Gen. Laws §§ 46-23-1 to 46-23-2.

#### **South Carolina:**

• Coastal Tidelands and Wetlands Act - S.C. Code Ann. §§ 48-39-10 to 48-39-360

#### **\*** Texas:

• Coastal Coordination Act of 1991 - Tex. Nat. Res. Code §§ 33.201 et seq.

#### Virginia:

- Wetlands Act Va. Code Ann. §§ 62.1-13.1 to 13.20.
- •Water Resources Management Act 10 V.S.A. Ch. 37, § 905(7) to (9)
- Land Use and Development Act 10 V.S.A. Ch. 10, §§ 6001 to 6092
- Coastal Primary Sand Dune Protection Act Va. Code Ann. §§ 62.1-13.21 to 62.1-13.28
- Chesapeake Bay Preservation Act Va. Code Ann. §§ 10.1-2100 et seq.

#### **\*** Washington:

- Shoreline Management Act –Wash. Rev. Code. Ann. § 90.58
- •Growth Management Act Wash. Rev. Code. Ann. § 36.70A

#### **\***Wisconsin:

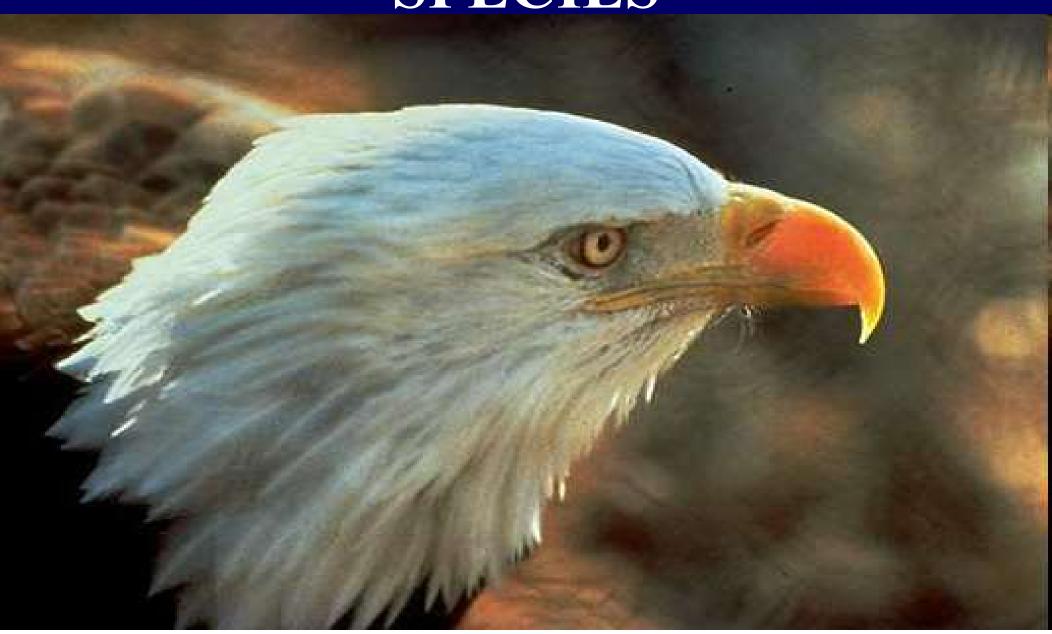
- Wetland Mapping Act Wisc. Stat. Ann. § 23.32.
- Shoreland-Wetland Zoning Wisc. Stat. Ann. §§ 59.971, 61.351, 62.23, 62.231 and 61.351
- Water Resources Development Act Wisc. Stat. Ann. § 59.692

#### **Wyoming:**

• Wyoming Wetland Act - Wyo .Stat. An..§ § 35-11-308 to 311



# WILDLIFE and ENDANGERED SPECIES



# FEDERAL ENDANGERED SPECIES ACT

16 U.S.C. § 1531

• **Purpose:** "Provide a means by whereby ecosystems upon which endangered species and threatened species depend may be conserved and to provide a program for the conservation of such endangered species and threatened species." 16 U.S.C. §1531(b)

#### Definitions:

- Endangered species "species which is in danger of extinction throughout all or a significant portion of its range." 16 U.S.C. § 1532(6)
- Threatened species "species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." 16 U.S.C. § 1532(20)

#### Steps to achieve statutory goal:

- Listing of species, designating critical habitat, planning for recovery
- Prohibitions against "killing, hunting, injuring, harming, or other take" of listed species
- Permitting otherwise prohibited takes, if incidental to lawful purpose
- Enforcement



# LISTINGS & CRITICAL HABITAT



# Step 1: Listing

- Based on:
  - The present or threatened destruction, modification, or curtailment of its habitat or range;
  - Overutilization for commercial, recreational, scientific, or education purposes;
  - Disease or predation;
  - Inadequacy of existing regulatory mechanisms; or
  - Other natural or manmade factors affecting its continued existence

# Step 2: Designate Critical Habitat

- Areas "essential to the conservation of the species"
- Areas "may require special management considerations"

# • Step 3: Recovery Plan

- Develop/implement plan for conservation and survival
- Priority to species that are, or may be, in conflict with construction or other development projects or other forms of economic activity

# TAKE PROHIBITIONS



- Section (9)(a)(1) unlawful for any person to "take" listed species
  - Applies to fish and wildlife listed as endangered
  - Interpreted as applying to threatened species as well
    - See Sweet Home Chapter of Communities for Great Oregon v. Babbitt, 1 F.3d (D.C. Circ. 1993)
- <u>Take</u> "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" 16 U.S.C.A. § 1532
  - **Harm** " an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral functions, including breeding, feeding, or sheltering."

50 C.F.R. §17.3

# **INCIDENTAL TAKE**

- **Exception to Take Prohibition** 
  - Allowed if take incidental to lawful activity such as real estate development
- **Section 7 applies to actions that** federal agency:
  - Funds
  - **Authorizes (permitting)**
  - Carries out
- Cannot jeopardize existence or adversely affect critical habitat





- **Consultation:** 
  - **Determine presence of** species
  - **Biological Assessment- "likely to** be affected"
  - Formal Consultation FWS **Biological opinion** 
    - Will it jeopardize existence or adversely affect critical habitat
  - **Action cannot go forward unless** there is a prudent alternative

# **AUTHORIZATION**

- Section 10(a) Authorizes issuance of permit allowing a taking that is incidental to, and not the purpose of, the carrying out of an otherwise lawful act"
  - Applies to projects not federally authorized, funded, or carried out
- Applicant Must Submit Conservation Plan:
  - Specifying impact of take
  - Efforts to Minimize and mitigate impacts
  - Why alternatives not being used
- Consultation Process not Required
  - Public notice and comment required



- Use of permitting authorization has been limited
  - 540 issued to date
  - Limited case law

# DEVELOPMENT PROJECT CHECKLIST



#### Before/During Project:

- Before acquisition, survey property for listed, proposed to be listed, petitioned to be listed, or otherwise on the radar screen of concern
- Consider impacts of project in terms of where development might intrude on species' habitat
- Self permit the project by adjusting development areas to avoid the habitat and to reduce secondary impact on habitat

#### During Permitting Phase:

- If a take is likely, determine desirability of proceeding under §7 versus §10(a)
- Prepare scientific documentation for review "avoid, minimize, mitigate"
- Consider which species should be covered in permit provisions for future listings
- Approach agency and discuss timeframe for permitting
- Proceed under §7 or §10(a) process

# RECENT CHANGES TO WILDLIFE POLICY



• President Obama issued a memorandum March 2009 which rescinded a Bush-era rule that weakened the Endangered Species Act. The Bush rule allowed federal agencies whose activities might harm threatened and endangered species to avoid the longstanding requirement that they consult first with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service.



#### · Alabama:

 Bear Protection Laws - Ala. Code §§ 9-11-480 - 9-11-481

#### Alaska:

Endangered Species Act - Alaska Stat. §§16.20.180 - 16.20.210

#### Arkansas:

Endangered, Threatened, and Nongame Species
 Preservation - Ark. Code Ann. §§ 15-45-301 - 15-45-306

#### California:

- California Endangered Species Act Cal. Fish & Game § 2050 - 2115.5
- Marine Life Protection Act Cal. Fish & Game §§ 2850 - 2863
- Protected Reptiles & Amphibians Cal. Fish & Game §§ 5000 5062

#### Colorado:

Nongame, Endangered, or Threatened Species
 Conservation Act - Col. Rev. Stat. Ann. §§ 33-2-101 - 33-2-108

#### **Connecticut:**

Endangered Species Act - Con. Gen. Stat. Ann.
 §§ 26-303 - 26-316

#### Delaware:

 Endangered Species Act - Del. Code Ann. Tit. 7, §§ 601 - 605

#### Florida

- Endangered and Threatened Species Act - Fla. Stat. Ann. §§ 379.2291 - 379.231

#### • Georgia:

Endangered Wildlife Act of 1973 – Ga. Code
 Ann. ST §§ 27-3-130 – 27-3-133

#### Hawaii:

- Endangered Species Act – Haw. Rev. Stat. Ann §§ 195D-1 – 195D-32

#### Idaho:

 Species Conservation – Idaho Code Ann. §§ 36-2401 – 36-2405



#### Illinois:

Illinois Endangered Species Protection Act - 10 Ill.
 Comp. Stat. Ann. §§ 10/1 -11

#### Indiana:

Nongame and Endangered Species Conservation Ind. Code Ann. §§ 14-22-34-1 - 14-22-34-21

#### Iowa:

Endangered Plants and Wildlife - Iowa Code §§
 481B.1 - 10

#### Kansas:

Nongame and Endangered Species Conservation
 Act - Kan Stat. Ann. §§ 32-957 – 32-963

#### Kentucky:

 Endangered Species - Ky. Rev. Stat. Ann. § § 150.180, 183, 990

#### Louisiana:

Threatened and Endangered Species Conservation
 La. Rev. Stat. Ann. § 56:1901

#### Maine:

Endangered Species - Me. Rev. Stat. Ann. tit. 12, §
 § 12801 - 12808

#### • Maryland:

Nongame and Endangered Species Conservation
 Act -Md. Code Ann. Nat. Res §§ 10-2A-01 - 09

#### Massachusetts:

Massachusetts Endangered Species Act - G.L. c.
 131A § § 1 - 7

#### Michigan

Endangered and Threatened Species Act of
 Michigan - Mich. Comp. Laws Ann. § 324.36501

#### • Minnesota:

Endangered Species Act - Minn. Stat. Ann. §§ 84.0895, 84.944, 97A.245, 97A.501

#### • Mississippi:

Nongame and Endangered Species Conservation
 Act - Miss. Code Ann. §§ 49-5-101 - 119

#### Missouri:

Endangered Species Law – Mo. Rev. Stat. §
 252.240

#### Montana:

Nongame and Endangered Species Conservation
 Act - Mont. Code Ann. §§ 87-5-101 - 132



#### Nebraska:

Nongame and Endangered Species Conservation
 Act - Neb. Rev. Stat. Ann. § 37-801

#### Nevada:

Protection and Propagation of Native Fauna Nev. Rev. Stat. Ann. § 503.584

#### New Hampshire:

Endangered Species Conservation Act - N.H.
 Rev. Stat. Ann. §§ 212-A:1 - A:15

#### New Jersey:

Endangered and Nongame Species Conservation
 Act - N.J. Stat. Ann. §§ 23:2A-1 - 15

#### New Mexico:

Wildlife Conservation Act - N.M. Stat. Ann. §§ 17-2-37 - 46

#### New York:

 Endangered Species - N.Y. Envtl. Conserv. Law § 11-0535

#### North Dakota:

- Definition of Endangered Species N.D. Cent.
   Code § 20.1-01-02
- Golden and bald eagle protected N.D. Cent.
   Code § 20.1-04-05

#### Ohio:

Endangered Species General Provisions - Ohio
 Rev. Code Ann. §§ 1518.01, 1531.25, 1531.99

#### Oklahoma:

Endangered or Threatened Species or
 Subspecies - Okla. Stat. Ann. tit. 29, § 5-412

#### Oregon:

Threatened or Endangered Wildlife Species - Or.
 Rev. Stat. Ann. §§ 496.171 – 996, 498.026

#### • Pennsylvania:

- Wild Resource Conservation Act 32 Pa. Cons.
   Stat. Ann. § 5301 14
- Protection of Game or Wildlife 34 Pa. Cons.
   Stat. Ann. § 2924

#### Rhode Island:

Endangered Species of Animals and Plants - R.I.
 Gen. Laws §§ 20-37-1 - 5

#### South Carolina:

Nongame and Endangered Species Conservation
 Act - S.C. Code Ann. §§ 50-15-10 - 90

#### South Dakota:

Endangered and Threatened Species - S.D.
 Codified Laws §§ 34A-8-1 - 13

#### Tennessee:

 Nongame and Endangered or Threatened Wildlife Species Conservation Act of 1974 – Tenn. Code Ann. §§ 70-8-101 - 112

#### Texas:

Endangered Species – Tex. Parks & Wild. Code
 Ann. §§ 68.001 - 021

#### • Utah:

 Wildlife Resources Code – Utah Code Ann. §§ 23-20-3 - 4.5

#### Vermont:

Protection of Endangered Species – Vt. Stat. Ann. tit. 10, § 5401

#### • Virginia:

Endangered Species – Va. Code Ann. §§ 29.1-563 - 570

#### Washington:

Endangered Fish or Wildlife – Wash. Rev. Code
 Ann. §§ 77.15.120, 130, 410, 420

#### Wisconsin:

Wild Animals and Plants – Wis. Stat. Ann. §§
 29.604, 29.977, 29.983



# PRACTICAL TIPS FOR REAL ESTATE PRACTITIONERS

- Learn about environmental agency organization and "who's who." This means headquarters and regional office authority. Identify the roles of division chiefs and directors. Find out who are the real decision makers. Meet their needs.
- Master the substantive and procedural requirements of the agency. These include notice requirements, timing of filing documents, submittal requirements, appeal deadlines, performance standards, design specifications, and any qualifications of persons filing information with the agency.
- Collect applicable laws and regulations. Obtain previous permits and typical permit conditions. Get any guidelines.

- Make informal contact with low-level agency officials to get tentative reactions to any proposals and submittals.
- Solicit agency ideas and incorporate their ideas in projects. Let the agency personnel feel they have a role in shaping any proposal before it is cast in stone and formally submitted.
- Make informational filings with appropriate agencies. This allows all to see the "larger plan" and avoid the "pinball effect" that sends applicants bouncing from one agency to another. Consider arranging joint filings and hearings.
- Invite the municipality to adopt the Streamlined Permitting approach allowed by state law for priority development areas

- Communicate with the agencies openly and anticipate likely reactions and concerns. Work with the lower level of agency personnel as senior staff rely on them. Understand and utilize agency precedents and traditional practices. Argue what is established law, fair procedure, and sensible policy.
- Plan ahead for agency meetings and hearings. Avoid pointless, premature sessions with high level agency officials who will spot issues, ask for more data, and then rely on staff reviews anyway.
- Work up the agency ladder so that a "yes" is final at any level but a "no" can go higher. Never accept a "no" answer.

- Use the persuasive approach, relying on the strength of your information. Master your project to show it meets all standards.
- Lobby around the agency's back only rarely, but utilize political clout when necessary. More often than not, political clout is most useful by "holding it back." Let the agency know you are ready, willing and able to go "all the way" for an approvable project.
- Enlist the support of neighbors, organizations and the public.
- Document meetings and telephone contacts. Maintain careful records. Keep track of your commitments and meet them. Memorialize agency promises in writing.

- Answer questions fully and accurately but do not acquiesce in unending requests for more information. Solidify requests.
- Make clear what you seek and why, and that you provided to the agency what is legally required and reasonable. Label anything else a voluntary or courtesy submittal.
- Stay calm: Lawyers can be most effective by leading others to common ground through careful listening, rather than by aggressively staking out legal arguments. Outspokenness will be more effective if you stay measured.
- Thank the agency personnel in writing for their time and consideration.

# WHAT'S NEXT: CLIMATE CHANGE

#### National Law

- **EPA Proposed Endangerment Finding** (April 17<sup>th</sup> 2009)
  - Endangerment Finding: Mix of 6 GHG's in the air threaten public health and welfare
  - Cause/Contribute Finding: combined emissions of GHGs from motor vehicles contribute to atmospheric concentrations of GHGs and hence to threat of climate change

## EPA Reporting Rule

• Suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to EPA

### EPA Proposed Tailoring Rule

• Require sources covered by the reporting rule to get permits and meet GHG control and energy efficiency requirements when significantly modifying existing or building new sources.

#### International Law

## - Kyoto

- International binding agreement for GHG reduction
- Ends 2012- Copenhagen Climate Conference Dec. 09



# WHAT'S NEXT: ENERGY EFFICICENCY

# American Clean Energy & Security Act

- Cap-and-trade program
- Electric utilities must meet 20% of their electricity demand through renewable energy sources/energy efficiency
- Invests in new clean energy technologies/energy efficiency
- Requires a 17% emissions reduction from 2005 levels by 2020

# • American Recovery and Reinvestment Act 2009

- \$16.8 billion to Office Energy Efficiency & Renewable Energy to fund various programs such as biomass, solar technology, vehicle technology, wind energy, geothermal technology, hydropower infrastructure, weatherization assistance, energy efficient building technologies, etc.



# WHAT'S NEXT: GREEN BUILDING

- Siting
- Design
- Materials
- Energy
- Construction

- Landscaping
- Transportation
- Utilities
- Operations
- Sustainability



# GREEN BUILDING (cont'd)

# U.S. Green Building Council

#### LEED Green Building Certification Program

- Measures sustainable sites, water efficiency, energy & atmosphere, materials & resources, indoor environmental quality, locations & linkages, awareness & education, innovation in design, and regional priority
- Over 35,000 projects are currently participating in the LEED system, comprising over 6.9 billion square feet of construction space in all 50 states and 114 countries

#### Cool Cities Program

• Step-by-step green building policy for communities. policies include leadership standards for government buildings that serve as models for the community; financial and no-cost incentives to build green for the commercial and residential sectors; and improved minimum efficiency standards through energy code adoption and enforcement.

# National Green Building Program

- Developed green building standard
- Certified Green Professional Designation
  - recognizes builders, remodelers and other industry professionals who incorporate green building principles into homes without driving up the cost of construction.



# The environmental aspects of real estate can be anticipated and managed professionally and successfully.

