



# EMERGING ISSUES IN ENVIRONMENTAL DUE DILIGENCE

## 2015 Environmental Permitting Summer School

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# Emerging Issues in Environmental Due Diligence

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## Phase I Environmental Site Assessments (ESAs)

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- **ASTM E1527-13 and EPA's AAI Rule**
    - ✓ **2010** – ASTM E1527 revision process commenced
    - ✓ **August 2013** – EPA issues Proposed Rule modifying AAI to reference ASTM E1527-13
    - ✓ **November 2013** – ASTM E1527-13 final publication
    - ✓ **December 30, 2013** – EPA issues final rule that added a reference to ASTM E1527-13 as being compliant with the AAI rule

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- **3.2.78 Definition of REC**

- ✓ The updated REC definition now states:

“...the presence or likely presence of any *hazardous substances or petroleum products* on a property under conditions that pose a material threat of a **future** release to the environment”

- ✓ The word **future** was added because there was inconsistency in correctly applying the “material threat” concept

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- 3.2.55 Definition of Material Threat

- ✓ “...A physically observable or obvious threat which is reasonably likely to lead to a **release** that, in the opinion of the EP, is threatening and might result in impact to human health or the environment”

- Material Threat of a Release??



- **Material Threat of a Release??**



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- **De Minimis Condition Pulled Out of REC Definition**

- ✓ 3.2.22 De Minimis Condition - **A condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.**
- ✓ Conditions determined to be *de minimis conditions* are **not** *recognized environmental conditions nor controlled recognized environmental conditions.*
  - Example: Oil stains in a parking lot



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- Phase I ESA “Buckets”

**De Minimis**



**HREC**



**CREC**



**REC**



**Increasing Severity**

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- **3.2.42 Historical REC (HREC)**
    - ✓ A **past** release of any hazardous substances or petroleum products that has occurred in connection with the property and has been **addressed** to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria without subjecting the property to any required controls
    - ✓ If the EP considers an HREC to be a REC, the HREC **must** be discussed in the Conclusion section (12.8):
      - Example: Change to regulatory criteria

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- **3.2.18 Controlled REC (CREC)**

- ✓ A *recognized environmental condition* resulting from a **past** release of hazardous substances or petroleum products that has been **addressed** to the satisfaction of the applicable regulatory authority with hazardous substances or petroleum products **allowed to remain in place subject to the implementation of required controls**
- ✓ CRECs **must** be discussed in the Conclusion section (12.8)

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- HREC vs. CREC
    - ✓ HRECs apply to a past release that has been addressed to unrestricted residential standards
    - ✓ CREC applies to a site that has been addressed to a commercial/industrial standard
    - ✓ “Addressed” does not necessarily mean remediated

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- **HREC vs. REC**

- ✓ An agency “closure” letter does not automatically mean HREC
- ✓ Has the site been addressed to the most stringent criteria?
- ✓ Have the regulations changed?
- ✓ Data review is essential to decide between HREC and REC

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- **6.0 User's Responsibilities**

- ✓ The “user” is the person/entity seeking CERLA liability protection or a brownfields grant
- ✓ The “user” is typically not a loan officer, lawyer, realtor or broker
- ✓ Foreign investors may have very limited understanding of U.S. environmental rules and regulations

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- **6.0 User's Responsibilities**

- ✓ **6.2: Review Title and Judicial Records for Environmental Liens and Activity and Use Limitations (AULs):**
  - This is the User's responsibility, not that of the EP – make sure that is clear up front

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- **8.0 Records Review**

- ✓ **8.1.4:** Reasonably Ascertainable
- ✓ **8.2.1:** Required Databases (Federal and State)
- ✓ **8.2.3:** Additional Databases – “To enhance and supplement the standard environmental record sources in 8.2.1, local records and/or additional federal, state or tribal records **shall** be checked



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- **Phase I ESA Report**

- ✓ **12.5:** Findings – Identify known or suspect RECs, CRECs, HRECs and de minimis conditions
- ✓ **12.6:** Opinion – EP **must** provide an opinion(s) of the impacts on the property of conditions identified in the Findings section. This is where suspect RECs should be discussed.
- ✓ **12.8:** Conclusions – Summary of RECs and CRECs

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- **Phase I ESA Report**

- ✓ Are recommendations required?
  - No
- ✓ Do you as the EP have the experience to make recommendations?

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# Environmental Due Diligence in Land Transactions

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## Beyond the Phase I ESA

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- **Introduction**

- ✓ REC or business environmental concern identified
- ✓ Phase II ESA or other additional assessment
- ✓ Discovery of contamination during due diligence
- ✓ Regulatory programs and no further action (SRCO)
- ✓ Emerging topics

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- **All RECs Are Not Equally Bad**
    - ✓ REC or business environmental concern identified
    - ✓ Practical considerations:
      - Quantity, distribution, exposure, cost
    - ✓ Understand liabilities and impacts to development:
      - Same or new land use
      - Demolition and construction

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- **Phase II ESA Process**

- ✓ Tool to evaluate RECs, or other business environmental risk
- ✓ Confirm or deny absence or presence of contamination
- ✓ Scope of work or client contract
- ✓ Phase II ESA Standard Practice ASTM E 1903-11



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- **Phase II Pitfalls**

- ✓ Access to locations
- ✓ Appropriate sampling methods
- ✓ Point source or non-uniform distribution of source
- ✓ Not enough samples collected; high dilution factors, cross-contamination
- ✓ Analyzing for parameters not associated with identified REC
- ✓ Composite sampling and archived aliquot samples
- ✓ Abandoned investigation-derived waste

- Phase II ESA





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- **Expanded Phase II ESA Process**
    - ✓ Contamination discovered
    - ✓ Reporting requirements
    - ✓ Deal considerations:
      - Escrow account for cleanup
      - Property value discount
      - Extend contract period

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- **Expanded Phase II ESA Process**
    - ✓ Estimate cleanup costs
    - ✓ Dewatering or development issues
    - ✓ Client's goals (land use, exposure scenarios)
    - ✓ Minimize unknowns
    - ✓ Deal proceeds or dies

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- **Florida Regulatory Structure**

- ✓ Contaminated Site Cleanup Rule (Ch. 62-780):
  - Petroleum Cleanup Rule (Ch. 62-770)
  - Drycleaning Solvent Cleanup Rule (Ch. 62-782)
  - Brownfields Cleanup Rule (Ch. 62-785)
- ✓ All repealed in June 2013

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- **Florida Regulatory Structure**

- ✓ Chapter 62-780 encompasses all prior regulations:
  - No further action
  - No further action with conditions:
    - ✓ Engineering controls
    - ✓ Institutional controls

## ■ Remediation

- ✓ Process of cleaning up contamination
- ✓ Typically lengthy process
- ✓ Can be very costly
- ✓ Can be a deal killer
- ✓ Making the deal happen:
  - Evaluate all options based on client's goals (land use)
  - Use regulatory tools to your advantage (background studies, de minimis rule, voluntary cleanup program)
  - Determine realistic costs and schedule milestones



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- **Cleanup Solutions**

- ✓ UCL statistical evaluation; site-specific CTLs
- ✓ De Minimis Rule cleanup
- ✓ Conventional removal
- ✓ Air stripping, air sparging
- ✓ Chemical or biological remediation



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- **Looking Forward**

- ✓ Anthropogenic background studies (April 2014 Miami-Dade County)
- ✓ Contaminated media forum
- ✓ Vapor migration and encroachment

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# Environmental Due Diligence in Land Transactions Vapor Migration

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## Vapor Migration

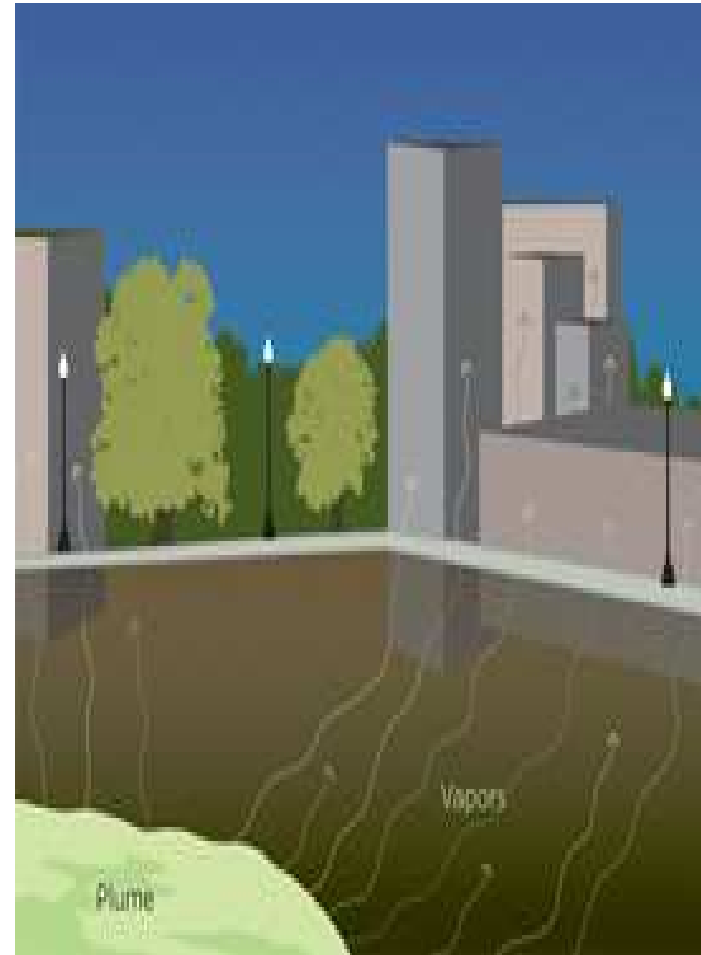
**Kirby Stallings, L.E.P., R.L.A.**  
S&ME, Inc.



- **What is a Vapor Encroachment Condition?**

“...the presence or likely presence of Contaminant of Concern [COC] vapors in the sub-surface of the target property caused by the release of vapors from contaminated soil or groundwater either on or near the target property...”

(E2600-10, Sect. 1.1.1)



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- **Vapors Under E1527-13**
    - ✓ ASTM E1527-13 includes consideration of vapors in the performance of a Phase I ESA:
      - Definition of REC
      - CERCLA/AAI definition of “release”
      - Activity and Use Limitations (AULs)
      - E2600-10 is a referenced document in E1527
      - Definition of “migration”

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- Vapors Under E1527-13

- ✓ Old E 1527-05 Definition of REC: "...an existing release, a past release, or a material threat of a release... into structures on the property, or into the ground, ground water, or surface water of the property"
- ✓ New E 1527-13 definition of REC: "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment"

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- **E1527-13 Refers to CERCLA Definition of “Release”**

“...any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing **into the environment** (including the abandonment or discharging of barrels, containers, and other closed receptacles containing any hazardous substances or pollutant or contaminant”

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- **CERCLA Definition of “Environment”**

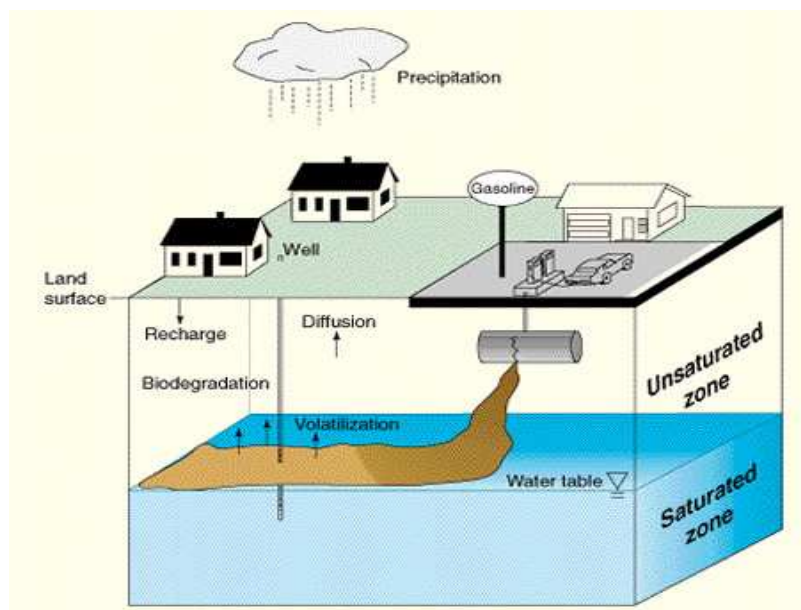
Includes “(A) the navigable waters, the waters of the contiguous zone, and the ocean waters...and (B) any other surface water, groundwater, drinking water supply, land surface or **subsurface strata...**”

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- **ASTM E1527-13 Definition of “AULs”**
    - ✓ AULs = “...restrictions or limitations...to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil, **soil vapor**, groundwater, and/or surface water on the property...”

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- **References to E2600-10 in E1527-13**
    - ✓ Definition of Migration – “movement of hazardous substances or petroleum products in any form, including solid and liquid at the surface or subsurface, **and vapor in the subsurface ...**”

## ■ Vapor Encroachment

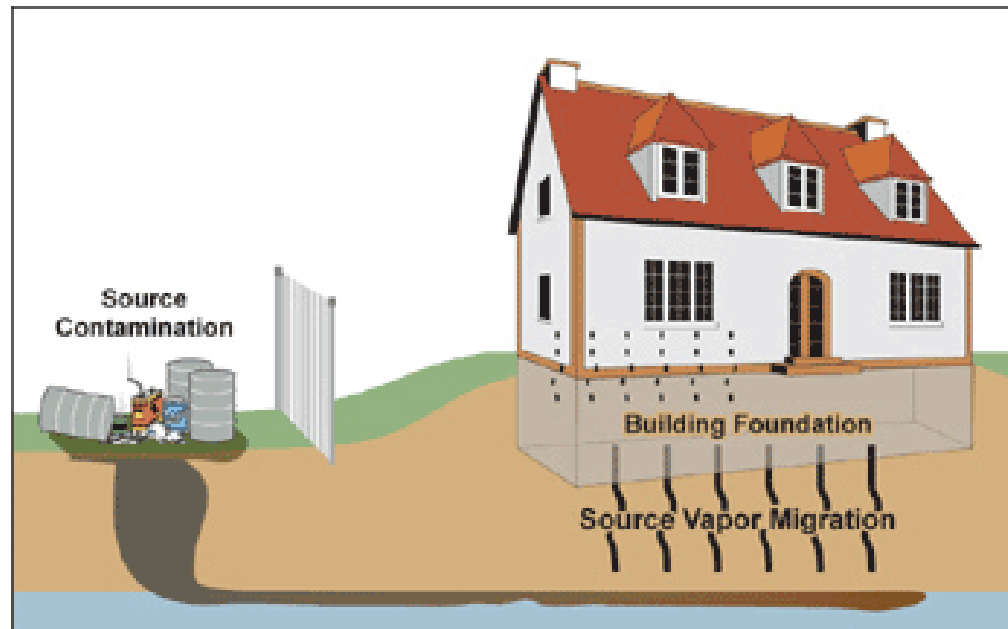
- ✓ Vapor Encroachment = Vapors beneath a property from soil or groundwater contamination from **on-site activities**, or vapors **migrating** beneath a property **from a nearby site**





- **Vapor Intrusion**

- ✓ Vapor Intrusion = Migration of vapors into a structure from subsurface soil or groundwater contamination



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- **ASTM E2600-10 Provides for Two “Tiers” of Screening Activities – Tier 1 and Tier 2**
    - ✓ **Tier 1: Initial Screening:**
      - Establishes Area of Concern (AOC) based on anticipated plume migration distances:
        - ✓ Dissolved petroleum plumes = 1/10 mile
        - ✓ Non-petroleum/NAPL plumes = 1/3 mile
      - AOC distances are based on statistical plume lengths for volatiles and petroleum products

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- **ASTM E2600-10**
    - ✓ **Tier 2: Additional Review:**
      - If a VEC cannot be ruled out in Tier 1, then additional review of regulatory data/contamination assessment data can be performed to determine if a plume is or could be located within the Critical Distance
        - ✓ Dissolved petroleum plumes = 30 feet
        - ✓ Non-petroleum/NAPL plumes = 100 feet
      - The Critical Distances are estimates of distances that vapors could travel from a plume in the vadose zone

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- **New/Updated Regulations Regarding Vapor Migration**
    - ✓ Office of Solid Waste and Emergency Response (OSWER), EPA:
      - *Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air*, June 2015:
        - ✓ Final guidance updating the 2002 draft document

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- **New/Updated Regulations Regarding Vapor Migration**
    - ✓ OSWER VI Guidance:
      - Intended primarily for use on CERCLA sites, RCRA sites, and Brownfield sites
      - Not intended for petroleum sites
      - Outlines multiple lines of evidence (soil, groundwater, soil gas, indoor air data) to formulate an opinion of risk

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- **New/Updated Regulations Regarding Vapor Migration**
    - ✓ OSWER VI Guidance:
      - Vapor intrusion pathway is either “complete” or “incomplete”
      - “Incomplete” pathway = Pathway is incomplete due to low source concentrations, geologic/hydrologic factors, and/or biochemical conditions

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- **New/Updated Regulations Regarding Vapor Migration**
    - ✓ If one or more of the following conditions are **absent**, the pathway is incomplete:
      - Source of vapor – forming chemicals is present
      - A subsurface route for vapor migration into a building is present
      - The building is susceptible to gas entry
      - One or more compounds in the subsurface vapors are present in the building **and**
      - The building is occupied by individuals when the compounds are detected

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- **New/Updated Regulations Regarding Vapor Migration: Petroleum**
    - ✓ EPA, Office of Underground Storage Tanks:
      - *Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites*, June 2015:
        - ✓ Written as an accompanying document to the OSWER VI document



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- **New/Updated Regulations Regarding Vapor Migration**
    - ✓ EPA, Petroleum VI:
      - Developed to address releases of petroleum products (i.e., gas stations)
      - The approach factors in the higher potential for aerobic degradation for petroleum products
      - Screening criteria were derived from the analysis of a broad dataset of leaking UST sites

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- **New/Updated Regulations Regarding Vapor Migration**
    - ✓ EPA, Petroleum VI:
      - Petroleum VI is associated with three groups of compounds:
        - ✓ Petroleum hydrocarbons
        - ✓ VOCs found in petroleum fuels (ethers, alcohols, and fuel additives)
        - ✓ Methane (from anaerobic biodegradation of petroleum hydrocarbons)

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- **New/Updated Regulations Regarding Vapor Migration**
    - ✓ EPA, Petroleum VI:
      - Assessment includes:
        - ✓ Determining extent of contamination
        - ✓ Assessing biodegradation potential
        - ✓ Assessing hydrologic/geologic characteristics of the site
        - ✓ Identifying receptors
        - ✓ Determining preferential pathways **and**
        - ✓ Identifying factors that would preclude the use of the screening criteria

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- **New/Updated Regulations Regarding Vapor Migration**
    - ✓ In conclusion:
      - Vapor migration must be considered in ESAs
      - Use of new EPA guidelines may be beneficial in some instances
      - OSWER VI: For use on federally regulated sites
      - Petroleum VI: Potentially used on privately owned sites



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# Ecological Due Diligence

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- **Common Ecological Issues**

- ✓ Wetlands
- ✓ Endangered species
- ✓ Stormwater:
  - Quality
  - Quantity
- ✓ Consumptive use
- ✓ Illegal activities



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- **New Statewide Environmental Resource Permit Rules**

- ✓ New statewide SWERP rules in Ch. 62-330, F.A.C., went into effect in October 2013
- ✓ These rules are based on the existing rules of DEP and the five water management districts
- ✓ Rules were reconciled for consistency
- ✓ Streamlining changes were made
- ✓ Water quality and quantity and environmental provisions remain substantially unchanged

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- **Four Components of the State Process**
    - ✓ Environmental resource considerations include:
      - Environmental factors
      - Water quality issues
      - Water quantity/flooding issues
      - Water use issues



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- **Wetland Issues to Consider Prior to a Purchase**

- ✓ Federal Wetland Issues:

- Is the project connected to WOTUS
- Jurisdictional differences
- Mitigation differences

- ✓ Local Regulations

- ✓ UMAM - Uniform Mitigation Assessment Method:

- DEP initiated rule development in 2013 to amend UMAM rules

- ✓ Availability of Mitigation:

- Mitigation banks
- On-site/off-site private projects



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- **State Wetland Issues**

- ✓ It is wise to do an assessment of wetlands prior to purchase so that the cost to offset those impacts can be factored into the purchase decision
- ✓ The assessment should be done using Rule 62-345, F.A.C., the Uniform Mitigation Assessment Method, which was adopted by DEP
- ✓ This is the sole method to be utilized by DEP, WMDs, and local governments to determine the amount of mitigation needed to offset impacts to wetlands and other surface waters [373.414(18), F.S.]

- **Available Mitigation Banks**
  - ✓ Prior to purchase, consider the cost and availability of credits
  - ✓ If a bank is not available, you will need to consider on-site or off-site options



- **Advance Information on Existing Water Quality is Critical**
  - ✓ DEP sets water quality standards; WMD have Applicants Handbooks with technical criteria to protect water quality; criteria is essentially the same under SWERP
  - ✓ Quality issues - It is very important to **determine** in advance **where the project will discharge**; requirements are higher for OFWs, Class I, II, & impaired waters
  - ✓ Net improvement is required if applicant cannot meet state water quality standards because ambient water quality does not meet standards [62-330.30(12), F.A.C.]

- **Additional Treatment for OFW, Class I, II and Impaired Waters You Should Consider**
  - ✓ Consider the cost of additional reasonable assurances to demonstrate protection of these water bodies which may include:
    - Additional 50% treatment
    - Additional best management practices
    - Additional maintenance requirements
    - Local water quality considerations



## Flooding



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- **Stormwater Quantity**

- ✓ Reasonable assurances must be provided that:
  - Activities will not cause flooding **and**
  - Quantity issues - May not cause adverse water quantity impacts to receiving waters and adjacent lands

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- **Water Quantity Requirements to Consider Before Purchase**
    - ✓ Off-site discharge rates are limited to those that won't cause adverse impacts to existing off-site properties.
    - ✓ Consider:
      - Historic discharge rates
      - Rates determined in previous permits **or**
      - Rates specified in WMD criteria (including special basins)
    - ✓ Use design storm event of 3-day duration and 25-year return frequency to compute off-site rates and set building floors above 100-year flood elevations
    - ✓ Local water flood control requirements should be considered



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- **Permit Transfer Requirements**

- ✓ Permittees shall notify DEP or the water management district within 30 days of change in ownership
- ✓ After notification, permits in the operation and maintenance phase automatically transfer [62-330.340(1), F.A.C.]
- ✓ Permits in the conceptual or construction phase require additional documentation
- ✓ Existing permittees shall be jointly and severally liable with the new owner for permit compliance and corrective actions until the permit is transferred [62-330.340(5), F.A.C.]
- ✓ ERP Applicants Handbook Vol. I, Section 12

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- **Permit Transfer Requirements**

- ✓ Purchasers should examine any existing ERPs and CUPs prior to purchase to determine permit requirements and authorizations
- ✓ If the permit is not transferred or a new permit obtained, the purchaser will be liable for operating a system without a permit or using water without a permit and jointly and severally liable with the permittee for permit compliance and corrective actions [62-330.340(5), F.A.C.]
- ✓ Also consider local permit transfer requirements

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- **Recommendations to Facilitate the Permit Process**

- ✓ The number one recommendation is to closely coordinate with agency staff; additionally, the following recommendations are made:
  - Submit Water Use Applications for irrigation and dewatering concurrent with the ERP application; if the ERP application is submitted first, make sure to reference the ERP application number on the WU application form; include an aerial location map with the WU application so that staff can easily identify the project location and determine whether there is an ERP pending or issued, and whether there are any wetlands onsite or nearby

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- **Recommendations to Facilitate the Permit Process**
    - Identify any work in, on, or over wetlands or other surface waters (OSW) on the ERP application form (it is often left blank); that way District administrative staff know to forward the application to the ACOE
    - When conducting seagrass surveys in preparation for an ERP application submittal, make sure to conduct the survey within the seagrass growing season (which generally is from June 1 to September 30, but may vary depending on the project location); it is also helpful to coordinate the seagrass survey with District and other agency staff even if still in the pre-application stage

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- **Recommendations to Facilitate the Permit Process**
    - Coordinate joint submittals of both the engineering and environmental information requested in RAI letters
    - With regard to RAIs, pre-response submittal meetings with staff are useful to expedite completeness of not only the RAI response, but also the application
    - If the project involves work in, on, or over wetlands or other surface waters and is located within Outstanding Florida Waters (OFW), the application must demonstrate that the project is clearly in the public interest
    - Include the qualitative information for wetland functional assessments as part of the application submittal; proposed functional assessment scores can also be submitted, but it is helpful to coordinate the quantitative wetland functional assessments with agency staff

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- **Recommendations to Facilitate the Permit Process**
    - Submit the information requested in Section E of the ERP application form (**don't just check the box and move on**); even a one sentence answer is better than nothing; less is not more for ERP applications; the more information submitted, the better
    - Review the new conservation easement procedures, including those pertaining to ownership and encumbrance reports
    - **Coordination, coordination, coordination!!!**