

Environmental Due Diligence in Land Transactions

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All Appropriate Inquiry (AAI) Rule

- 2002 - Congress passed Brownfield Amendments to CERCLA stating that conducting “all appropriate inquiries” is a precondition for CERCLA liability defenses or Brownfield grants
- Congress then instructed EPA to develop the AAI rule
- EPA developed the AAI rule while ASTM revised E1527
- 2005 - AAI Final Rule published that included a reference to E1527-05 and established a one year phase-in period
- Prior E1527 publications: 1993, 1994, 1997, 2000 & 2005

AAI Rule & ASTM E1527-13

- 2010 – ASTM E1527 revision process commenced
- March 2013 - Formal submission of “proposed” E1527-13 to EPA
- August 2013 – EPA issues Proposed Rule modifying AAI to reference ASTM E1527-13
- August/September 2013 – public comment period
- 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

So What Has Changed?

- 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

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.”

Examples

- An AST containing hazardous materials which shows visible signs of damage:
 - Yes! The damage would represent a material threat of a release if it is deemed serious enough that it may cause or contribute to tank integrity failure with a release to the environment.
- A UST containing petroleum:
 - Maybe. The UST itself is not a REC, but the likelihood of a release could be. Is there documentation that would lead the EP to suspect a release (ex: age, inventory logs, tank tightness test)?

So What Else Has Changed?

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

So What Else Has Changed?

3.2.18 Controlled REC (NEW)

- 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

NOTE 3 - A condition identified as a CREC does not imply that the EP has evaluated or confirmed the adequacy, implementation, or continued effectiveness of the required control that has been, or is intended to be, implemented

HREC vs. 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

NOTE 3 - A condition identified as a CREC does not imply that the EP has evaluated or confirmed the adequacy, implementation, or continued effectiveness of the required control that has been, or is intended to be, implemented

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

Phase I ESA "Buckets"

De minimis



HREC



CREC



REC



Phase I ESA Report

- 12.5 Findings – Identify known or suspect REC, CREC, 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 a suspect RECs should be discussed.
- 12.8 Conclusions – Summary of RECs and CRECs

Environmental Due Diligence in Land Transactions

Beyond the Phase I ESA



Roger Simon

Langan Engineering & Environmental Services

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)

All RECs Are Not Equally Bad

- REC or business environmental concern identified
- Practical considerations:
 - quantity, distribution, exposure, cost
- Discovery of contamination during due diligence
- Understand liabilities and impacts to development

Phase II ESA Process

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



Expanded Phase II ESA Process

- Contamination discovered
- Reporting requirements
- Deal considerations
- Establish baseline conditions
- Leachability of soil
- Data collection; N samples
- Minimize unknowns
- Estimate cleanup costs
- Deal proceeds or dies

Phase II Conclusions

- Contamination discovered and delineated
- Not delineated – SAR will likely be required
- Sufficient samples to understand impacts
- Dewatering or development issues
- Client's goals (land use, exposure scenarios)

Phase II Pitfalls

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

Phase II ESA



Transaction Negotiations

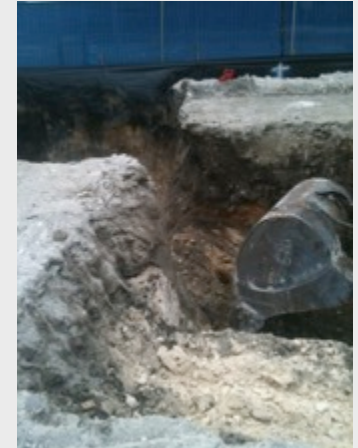
- Contamination discovered; who is responsible party?
- Reporting requirements; due diligence extension
- Seller can establish escrow account for cleanup
- Buyer discount
- Deal delay until cleanup complete
- No Further Action versus no further action

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
- Chapter 62-780 encompasses all prior regulations

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



Cleanup Solutions

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



Looking Forward

- Anthropogenic Background Studies (Miami-Dade County)
- Vapor Migration and Encroachment
- Regulatory changes
- Cleanup level changes
- Contaminated Media Forum

Environmental Due Diligence in Land Transactions

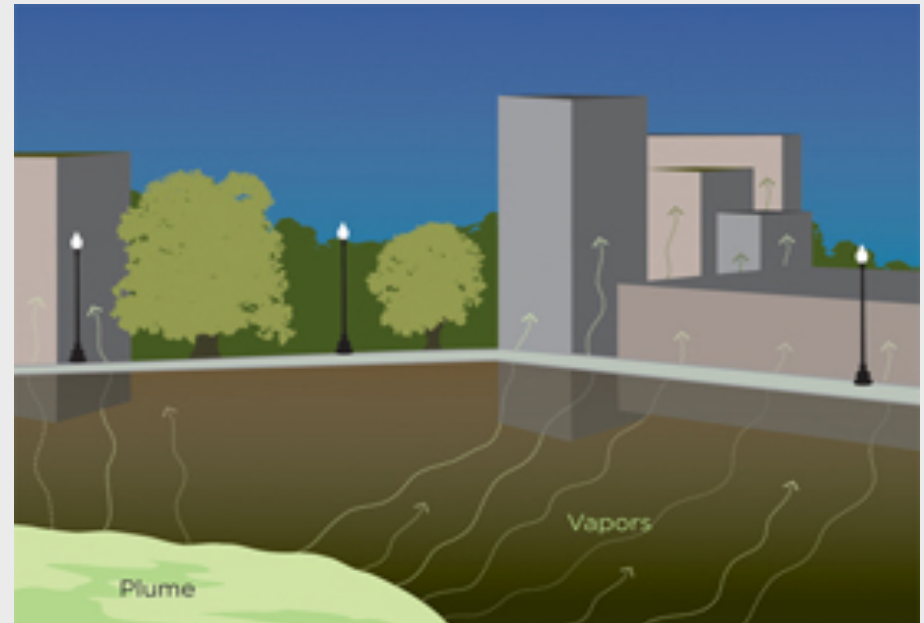
Vapor Considerations in Phase I ESAs

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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)



Vapors Under E1527-13

- The ASTM E1527 Standard Practice was amended in August 2013, and the final rule was published in the Federal Register on December 30, 2013.

Vapors Under E1527-13

ASTM E1527-13 includes consideration of vapors in the performance of a Phase I ESA:

- New definition of REC
- CERCLA/AAI definition of “release”
- Activity and Use Limitations (AULs)
- E2600-10 is a referenced document in E1527
- Definition of “migration”

- 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**”

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”

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**...”

ASTM E1527-13 Definition of "AULs"

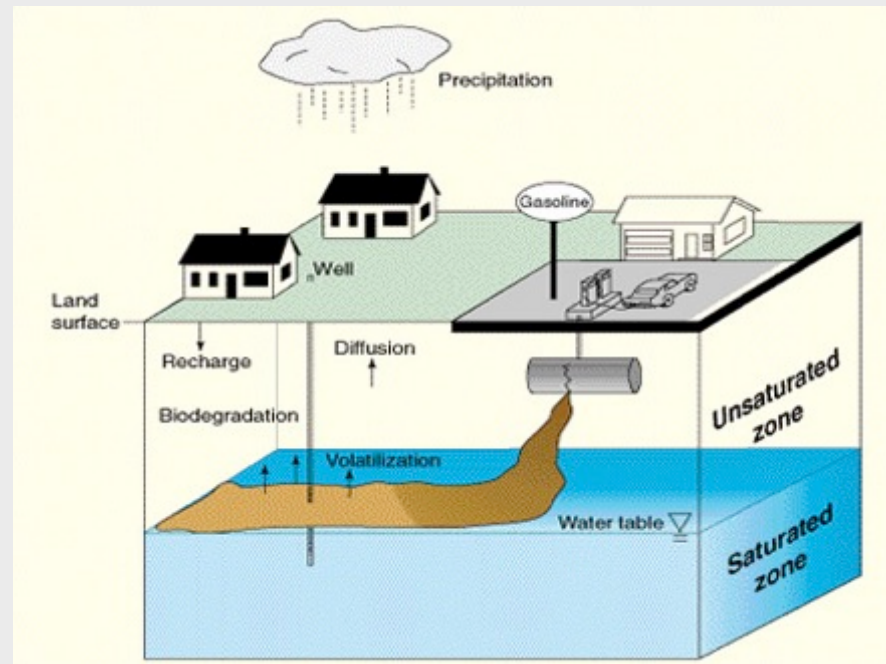
AULs = "...restrictions or limitations...to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil, **soil vapor**, groundwater, and/or surface water on the property..."

References to E2600 in E1527-13

- Referenced Documents section (Section 2)
- 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 ...**”

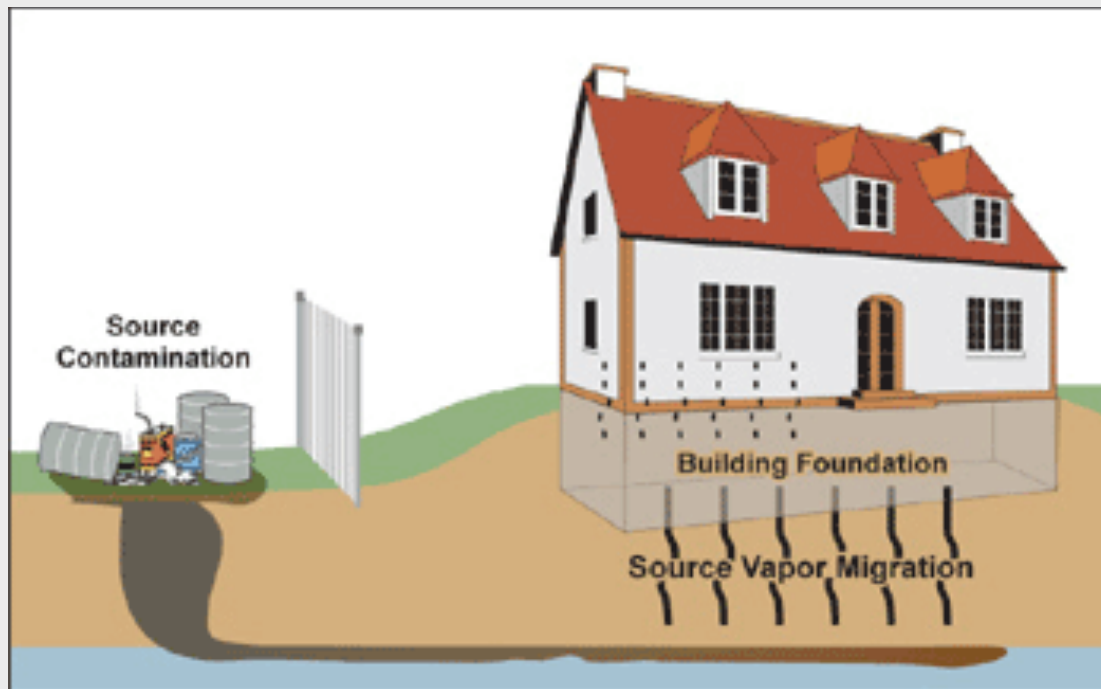
Vapor Encroachment

- 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



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

ASTM E2600-10

■ Tier 2:

- 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

How Does This Effect My ESAs?

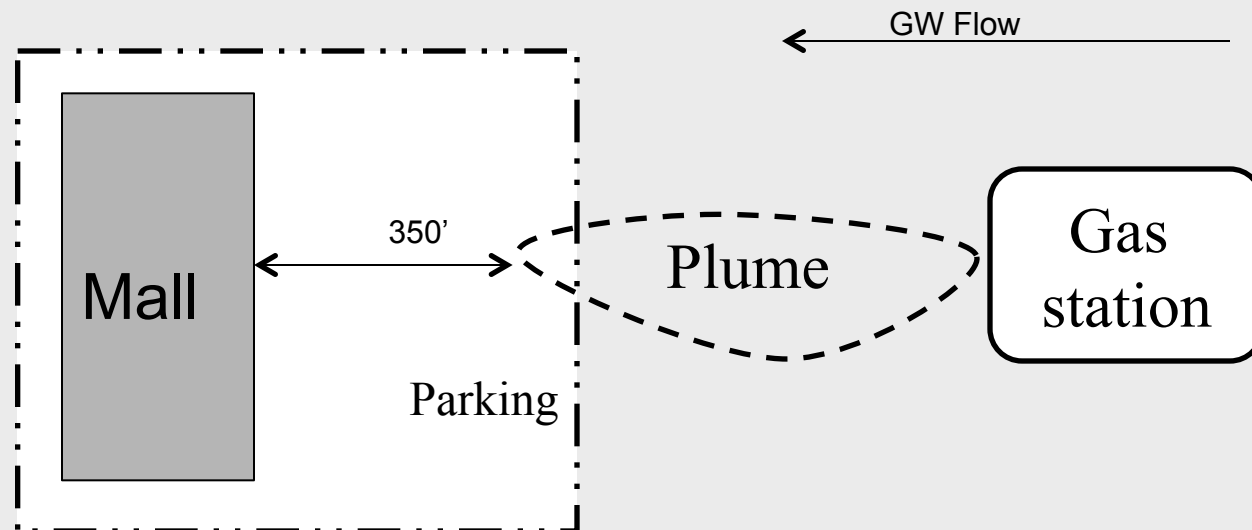
- Vapors now have to be considered in preparation of ESAs much like migration of contaminated groundwater beneath a property is considered
- Evaluation of VE on sites in densely developed/industrial areas can add considerable time (\$) to the preparation of ESAs
- Consultants are often hesitant to charge extra for a formal (ASTM E2600-10) Vapor Encroachment Screening due to market pressures (i.e., tight budgets)

Overall Effect of Vapor Considerations on ESAs

- Do I have to prepare an ASTM E2600-10 Vapor Encroachment Screening for each and every Phase I ESA?...**NO**; although E2600-10 is referenced in E1527-13, the standard does not specify that E2600-10 must be used
- Under certain conditions, vapor encroachment can be a Recognized Environmental Condition
- When is a VEC **not** a REC?...Ultimately to be decided by the Environmental Professional based on interpretation of available data

Examples of VEC vs. REC

- A petroleum contaminant plume has migrated towards a large shopping mall from a nearby/upgradient gas station; depth to GW is about 5 feet



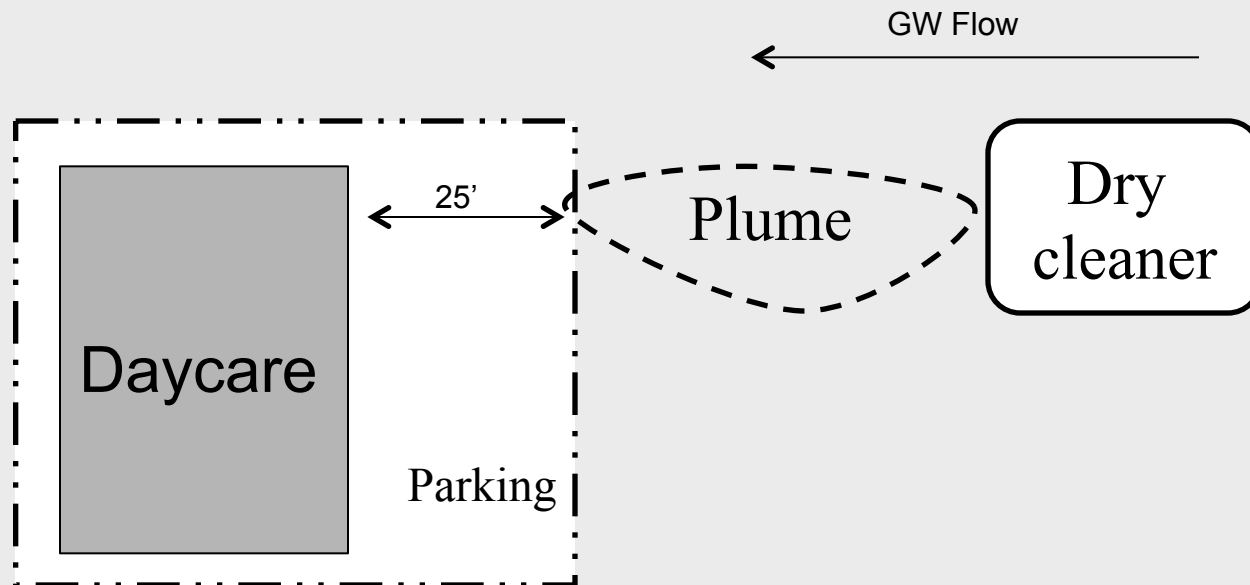
Examples of VEC vs. REC (**Continued**)

- Is this a VEC?
 - Yes, because the plume has crossed beneath the property line

- Is the VEC a REC?
 - Probably not, given the distance from the edge of the plume to the nearest structure (350'), which is more than the Critical Distance for a dissolved petroleum plume (30')

Examples of VEC vs. REC (Continued)

- A groundwater contaminant plume has migrated from a nearby dry cleaner towards a commercial property; the building is occupied by a Daycare facility; depth to GW is about 5 feet



Examples of VEC vs. REC (**Continued**)

- Is this a VEC?
 - Yes, because the plume has crossed beneath the property line
- Is the VEC a REC?
 - Probably so, since the distance from the edge of the plume to the building is less than the 100' VOC critical distance, and the occupants inside the building could potentially be affected by vapors migrating into the building

Ecological Due Diligence

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Common Ecological Issues

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



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

Four Components of the State Process

- Environmental Resource Considerations Include:
 - Environmental factors
 - Water quality issues
 - Water quantity/flooding issues
 - Water Use Issues

First Step is to Determine if Project is Exempt

- State exemptions are primarily set forth in Ch. 373.406 and 403.813, F.S.
- Additional new state exemptions are set forth in SWERP rules
- Even if you qualify for a state exemption, prior to purchasing property you must still take into account:
 - Federal requirements; and
 - Local requirements

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



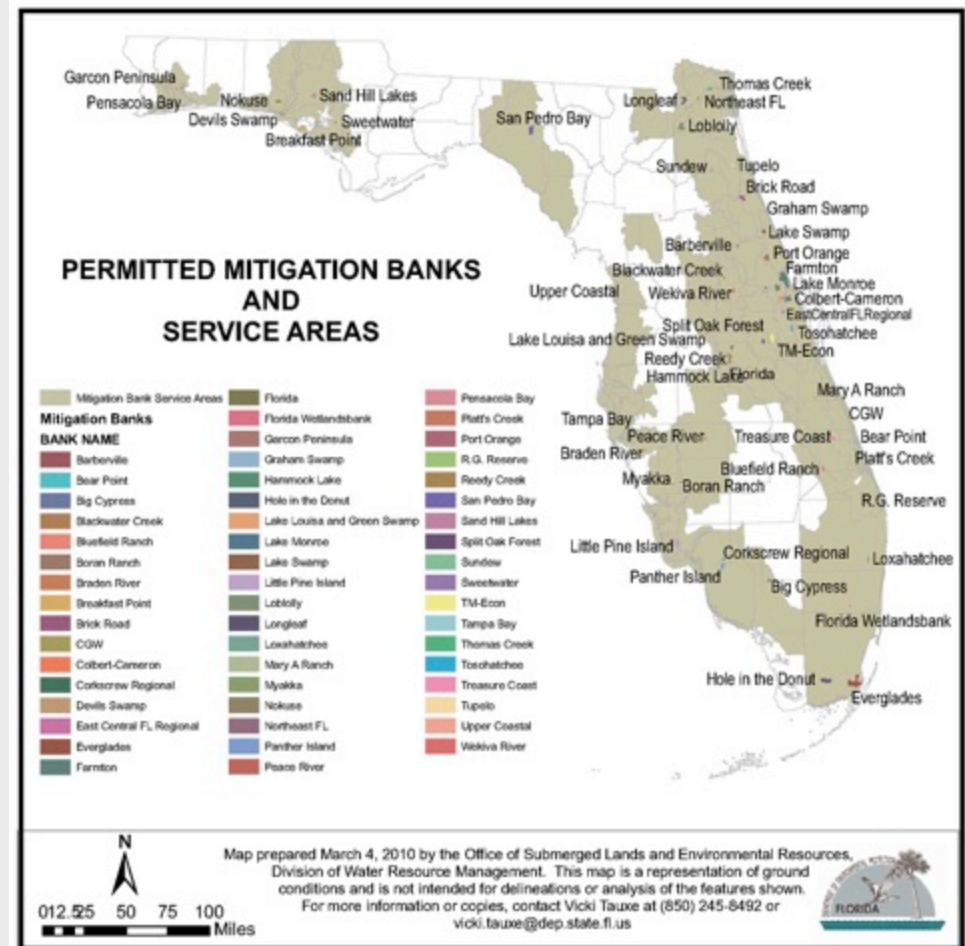
State Wetland Issues

- 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

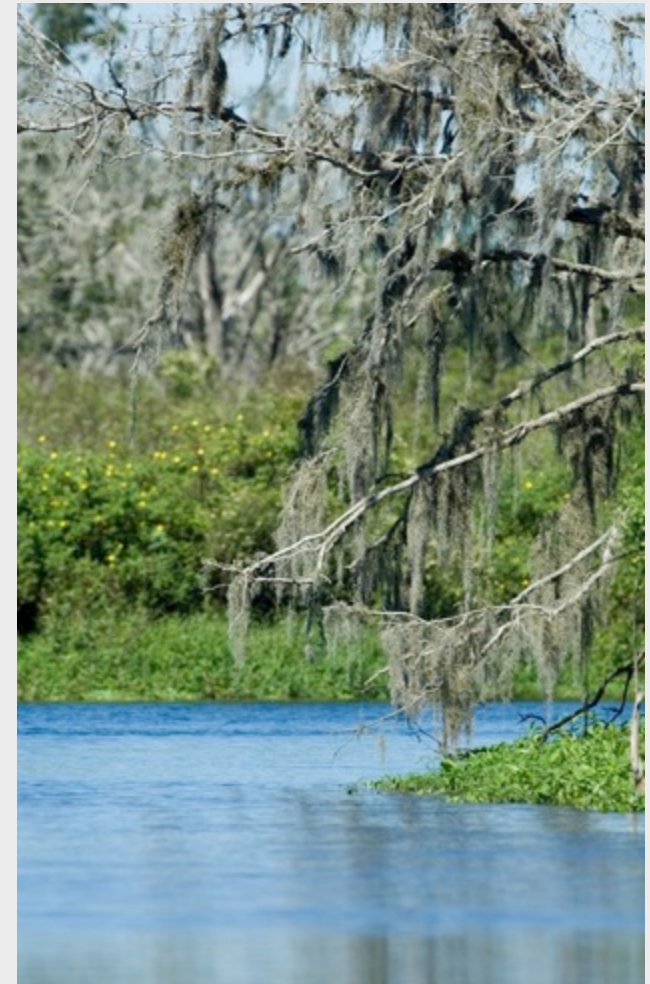


Advance Information on Existing Water Quality is Critical

- 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



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

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

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

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