Appendix A

Gottfried Creek Shoreline Inspection

December 16, 2011 and July 2, 2012

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Figure A.1.

GC-1: 18” Concrete Stormwater Pipe
26.93582/-82.34287

Figure A.2.

GC 2: 30” Concrete Stormwater Pipe
26.93642/-82.34315

Figure A.3.

GC-3: 18” Concrete Stormwater Pipe
26.93681/-82.34322

Figure A.4.

GC-4: 4" PVC Pipe in Bulkhead
26.93706/-82.34344

Figure A.5.

GC-4: 4" PVC Pipe crushed on inside of bulkhead; No connection to anything.

Figure A.6.

GC-5: 1" PVC pipes; Green box; Above-ground swimming pool on property. 300 Bay Heights Ave., Englewood, FL
26.94417/-82.34788

Figure A.7.

GC-6: 5-6 Free-Roaming Chickens
300 Bay Heights Ave., Englewood, FL
26.94443/-82.34705

Figure A.8.

GC 7: 30" Concrete Culvert Pipe; Discharge has surface scum and stale odor; Collected GOT-1 grab sample for fecal coliform;
26.94497/-82.34716
Sample Results 120 col/100mL

Figure A.9.

GC-8: Open Stormwater Ditch; White/Gray Slime at Outfall; Collected GOT-2 grab samples for fecal coliform.
26.94584/-82.34699
Sample Results 550 col/100mL

Figure A.10.

GC-9: 30” Concrete Stormwater Pipe
26.94641/-82.34728

Figure A.11.

GC-10: Wildlife – Baby Raccoon
26.94641/-82.34728

Figure A.12.

GC-11: 18” Concrete Pipe; Deer Creek MHP
26.94672/-82.34560

Figure A.13.

GC-12: 30” Concrete Stormwater Pipe 26.96346/-82.34303

Figure A.14.

GC-13 & GC-14: Wildlife – Flock of White Ibis; Creek Narrow & Shallow; Not Navigable; 26.96523/-82.34736

Figure A.15.

GC-15: 30” Concrete Stormwater Pipe 26.96305/-82.34315

Figure A.16.

GC-16: Roof Downspouts Flow to Canal
26.96151/-82.34081

Figure `A.17.

GC-16: 5-2" PVC Pipes Stuck in Ground;
26.96151/-82.34081

Figure A.18.

GC-17: 12" Concrete Pipe in Seawall;
4 Large Dogs
26.95395/-82.34314

Figure A.19.

GC-18: 4'-5' Culvert Pipe Connects
Large Open Stormwater Ditch to Canal
26.95320/-82.34142

Figure A.20.

GC-19: 6" Black Plastic Pipe in RipRap
26.95321/-82.34270

Figure A.21.

GC-20: 4" Metal Pipe with PVC Extension
26.98323/-82.34335

Figure A.22.

GC-21: 4" PVC Pipe in Bulkhead
26.95273/-82.34412

Figure A.23.

GC-22: 20" Concrete Stormwater Pipe
26.95273/-82.34412

Figure A.24.

GC-23: 4" PVC Pipe under Dock
26.94971/-82.34447

Figure A.25.

GC-24: 1” PVC Pipe. Swimming Pool on Property
26.94966/-82.34418

Figure A.26.

GC-24: 1” Garden Hose with Red Stripe
26.94966/-82.34418

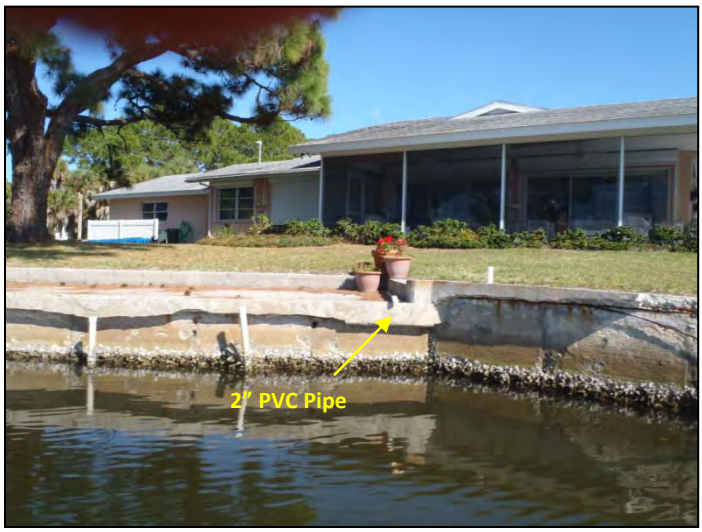
Figure A.27.

GC-24: 1” Garden Hose with Red Stripe
26.94966/-82.34418

Figure A.28.

GC-25: 5" Black Plastic Pipe under Concrete Hood
26.94970/-82.34465

Figure A.29.



GC-26: 2" PVC Pipe with Gray Elbow
26.94407/-82.34459

Figure A.30.

GC-27: 18" Metal Pipe Under Dock
26.94375/-82.34364

Figure A.31.

GC-28: 4” PVC Pipe in Bulkhead
26.94320/-82.34423

Figure A.32.

GC-29: 18” Metal Stormwater Pipe; 4” PVC Pipe in Bulkhead
26.94297/-82.34415

Figure A.33.

GC-30: 1-3” and 1-6” Pipes in Bulkhead
26.94104-82.24448

Figure A.34.

GC-31: 4 PVC and 2 Clay Pipes in Bulkhead
26.94069/-82.34470
Property owner advised that they were connected to roof drains, but they now have been disconnected.

Figure A.35.

GC-32: 18” Concrete Stormwater Pipe
26.93804/-82.34581

Figure A.36.

GC-33: 4” PVC Pipe in Bulkhead
26.93778/-82.34574

Figure A.37.

GC-34: 4” PVC Pipe in Bulkhead
26.93730/-82.34557

Figure A.38.

GC-35: 6” Plastic Pipe in Bulkhead
26.93696/-82.34526

Figure A.39.

GC-36: 4” Pipes in Bulkhead
26.93640/-82.34512

Figure A.40.

GC-37: 2-3” Pipes in Bulkhead
26.93559/-82.34482

Figure A.41.

GC-38: 3” Metal Pipe in Bulkhead
26.93532/-82.34482

Figure A.42.

GC-39: 3” PVC Pipe in Bulkhead
26.93466/-82.34489

Figure A.43.

GC-40: 6” Black Plastic Pipe – Roof Drain
26.93454/-82.34542

Figure A.44.

GC-41: 2” & 4” PVC Pipes; 4” could be roof drain
26.93530/-82.34596

Figure A.45.

GC-42: Stormwater Outfall
26.93626/-82.34625

Figure A.46.

GC-43: 4” PVC Pipe – Angled Down; In line with roof drain
26.93648/-82.34631

Figure A.47.

GC-44: 4” Metal Pipe
26.93664/-82.34638

Figure A.48.

GC-45: 4 PVC Pipes
26.93688/-82.34645

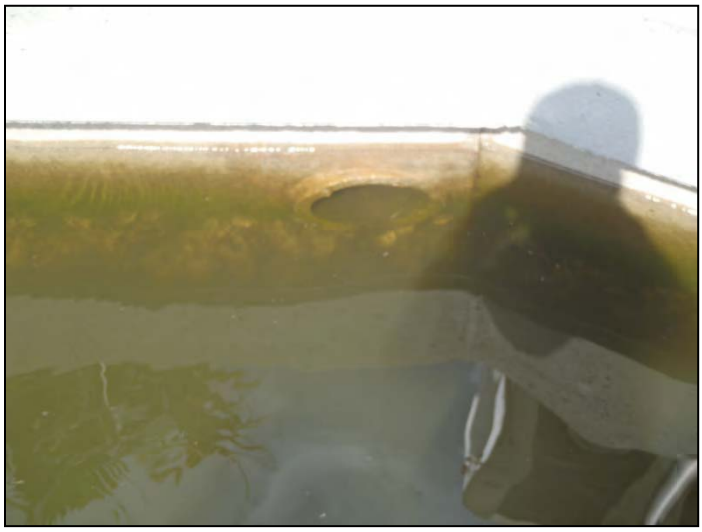
Figure A.49.

GC-46: 4” PVC Pipe
26.93692/-82.34647

Figure A.50.

GC-47: Five 6” PVC Pipes in Bulkhead;
Middle could be roof drain
26.93702/-82.34657

Figure A.51.



GC-48: 8” Concrete Stormwater Outfall
26.93759/-82.34672

Figure A.52.

GC-49: 6” Plastic and 3” Clay Pipe
26.93577/-82.34621

Figure A.53.

GC-50: 8” Concrete Stormwater Pipe
26.93511/-82.34600

Figure A.54.

GC-51: 6” Black Pipe; Stormwater Runoff
26.93511/-82.34600

Figure A.55.

GC-52: 6” Black and 2-20” Green Pipes;
Stormwater Runoff
26.93541/-82.34534

Figure A.56.

GC-53: 6” Black Pipe; Stormwater Runoff
26.93543/-82.34521

Figure A.57.

GC-54: 3” PVC Pipe in Bulkhead
26.93455/-82.34508

Figure A.58.

GC-55: 3” PVC Pipe; May be overflow from cistern
26.93463/-82.34508

Figure A. 59.

GC-56: 3” PVC Pipe; Roof Drain
26.96419/-82.34338

Figure A. 60.

GC-57. Private Lift Station.
300 Bay Heights Ave., Englewood, FL
26.94434/-82.34797

Figure A.61 Shoreline Inspection Map 1.

Figure A.62 Shoreline Inspection Map 2.

Figure A.63. Shoreline Inspection Map 3.

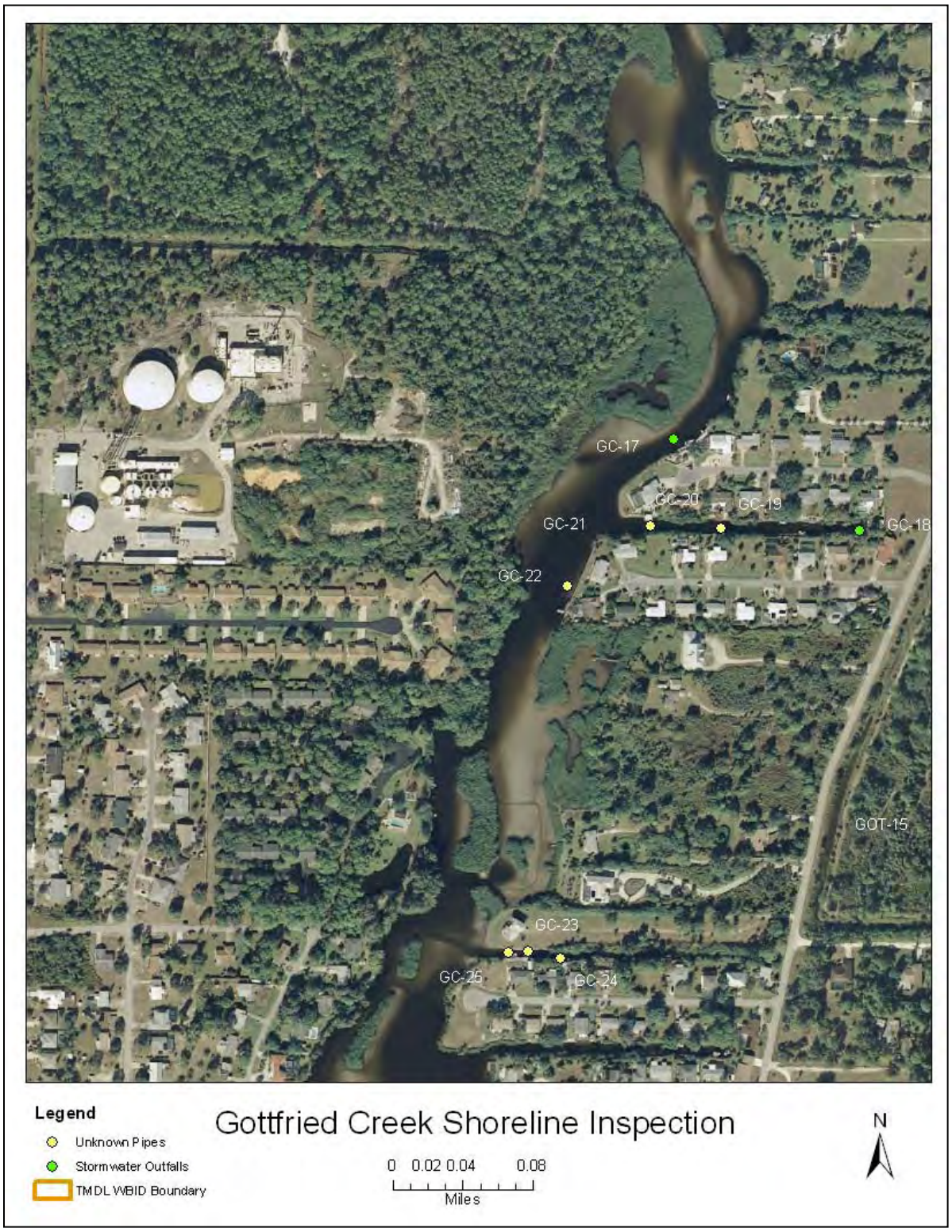


Figure A.64. Shoreline Inspection Map 4.

Figure A.65 Shoreline **Inspection Map 5.**

APPENDIX B

Private and Public Lift Stations

Gottfried Creek Basin

WBID 2049

Sarasota County Lift Station P-48; Englewood Sports Complex
Main Building

Sarasota County Lift Station P-48A; Englewood Sports Complex
Soccer Field Behind Restroom Facility

Sarasota County Lift Station P-48B; Englewood Sports Complex
Adult Softball Fields Behind Restroom Facility

Private Lift Station P-48C; Englewood Sports Complex
Concession Stand

Private Lift Station P-48C: Englewood Sports
Complex Concession Stand; Emergency Signage

Private Lift Station P-48C Cover; Englewood Sports Complex Concession stand

Sarasota County Lift Station P-48D; Englewood Sports Complex
Cal Ripken Field Behind Restroom Facility

Sarasota County Lift Station P-48D; Englewood Sports Complex
Cal Ripken Field Behind Restroom Facility; Emergency Signage

Private Lift Station P-71; Jones Fogelman Pool & Spa Services
858 S. River Rd.; No Emergency Signage

EWD Lift Station 129; Stiver's Tire & Auto
850 S. River Rd.

Private Lift Station P-67; Storage Units
916 S. River Rd.; No Emergency Signage

Private Lift Station P-80; Firehouse Practice Facility
13400 Haligan Way; No Emergency Signage

Private Lift Station P-38; Suncoast Worship Center
881 S. River Road

Private Lift Station P-38; Suncoast Worship Center
881 S. River Road; No Emergency Signage

EWD Lift Station P-116; Englewood United Methodist Church
700 E. Dearborn

EWD Lift Station P-116; Englewood United Methodist Church
700 E. Dearborn

Private Lift Station P-66; Publix Shopping Center
55 N. Indiana Avenue; No Emergency Signage

EWD Lift Station 142; BPOE Englewood Lodge 2378
401 N. Indiana Avenue

EWD Lift Station 142; BPOE Englewood Lodge 2378
401 N. Indiana Avenue

EWD Lift Station 134; 248 Park Forest Blvd.
Park Forest

EWD Lift Station 133; Wekiva River Ct. at Indian Key Way
Park Forest

EWD Lift Station 132; 320 Indian River Lane
Park Forest

EWD Lift Station 132; 320 Indian River Lane
Park Forest; No Emergency Signage

Private Lift Station P-31; 601 Linden Dr.
Foxwood

EWD Lift Station LP-685; Northside Christian Church
685 N. Indiana Avenue

Private Lift Station; Charles Eagar, MD Office
655 N. Indiana Avenue; No Emergency Signage

EWD Lift Station LP 701A; Christ Lutheran Church
701 N. Indiana Avenue; No Emergency Signage

EWD Lift Station LP 701B; Christ Lutheran Church
701 N. Indiana Avenue; No Emergency Signage

EWD Lift Station 126; Tangerine Woods Blvd. @ Seabrooke Dr.
Tangerine Woods

EWD Lift Station 127; Tangerine Woods Blvd. @ Watersedge
Tangerine Woods

EWD Lift Station 135; Yosemite Dr. @ Club House
Oak Forest

EWD Lift Station 137; Arbroath Blvd. @ Ipswich Dr.
Arlington Cove

EWD Lift Station 137; Arbroath Blvd. @ Ipswich Dr.
Arlington Cove; No Emergency Signage

EWD Lift Station
Old Englewood Rd. & Pablo Picasso Dr.

Private Lift Station P-27; Englewood Elementary School
150 N. McCall; No Emergency Signage in View

Private Lift Station P-72; Café 776;
138 N. Indiana Ave.

Private Lift Station P-29; Sassy Snapper Restaurant
70 N. Indiana Avenue
Restaurant is Closed

EWD Lift Station 112
Pine Hollow Condominiums; Pine Hollow Circle

EWD Lift Station 112; Pine Hollow Condominiums;
Near 309 Pine Hollow Circle; Emergency Signage

EWD Lift Station 28; Quails Run Condominium;
Quails Run Boulevard; No Emergency Signage

EWD Lift Station 28; Quails Run Condominium;
Quails Run Boulevard; No Emergency Signage

EWD Lift Station 111
Quails Run Condominium; Quails Run Boulevard

Private Lift Station P-3; Englewood Laundry
100 S. Indiana Ave.; No Emergency Signage

Private Lift Station P-3; Englewood Laundry
100 S. Indiana Ave.; No Emergency Signage

EWD Lift Station 19
St. David's Episcopal Church, 401 Broadway Ave.

Private Lift Station P-62; Englewood Center
200 S. Indiana Ave @ Palm Grove Avenue
South end of shopping center; No Emergency Signage

Private Lift Station P-1; Englewood Bowl
299 S. Indiana Avenue
In front parking lot; No Emergency Signage

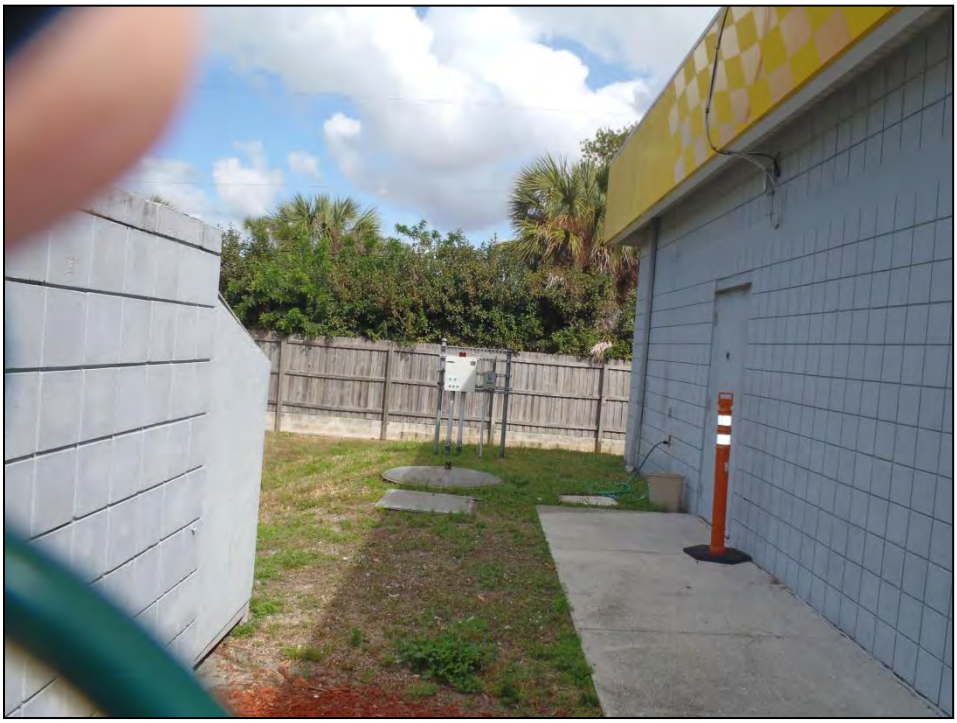
Private Lift Station P-61; Provision Eye Center
473 S. Indiana Avenue; No Emergency Signage; No Lock

EWD Vacuum Pump Station V-1
446 Alta Vista Avenue

p

EWD Lift Station 7
Spruce and Hosmer; No Emergency Signage

Private Lift Station P-45; Lemon Bay Breeze Condominium
1401 S. McCall Rd.



Private Lift Station P-84; Sunoco
1680 S. McCall Rd.

Private Lift Station P-84; Sunoco; 1680 S. McCall Rd.;
Emergency Signage; LS Fenced and Locked

Private Lift Station P-50; BP Gasoline Station
1800 S. McCall Rd.; Station Closed;
Under Renovation; No Emergency Signage

Private Lift Station P-59; Venetian Cleaners
1900 S. McCall Rd

Private Lift Station P-59; Venetian Cleaners
1900 S. McCall Rd; Emergency Signage

Private Lift Station P-9; Denny's Restaurant
1912 S. McCall Road; No Emergency Signage

EWD Vacuum Pump Station V-6
1025 Kathleen

EWD Lift Station 122
Englewood Community Hospital; E. Medical @ Doctors Dr.

EWD Lift Station 122
Englewood Community Hospital; E. Medical @ Doctors Dr.

LIFT STATION VIOLATION LETTERS

SARASOTA COUNTY

"Dedicated to Quality Service"

August 13, 2012

Richard D. Cormier, Property Owner
751 Buckskin Ct.
Englewood, FL 34223

Subject: Courtesy Notice Regarding a Private Wastewater Lift Station
916 S. River Road, Englewood, Florida 34223; PID 0850-05-0003

Dear Mr. Cormier:

One of the reasons that Sarasota is such a special place to live is our water resources. The hundreds of waterways, streams, canals, and ponds all connect and eventually drain into our bays and estuaries. Simply put, what goes on the ground eventually ends up in our water. Every resident and visitor has a role to play in protecting our resources, and what you do on your property does make a difference.

The purpose of this letter is to remind you of your responsibility to properly operate and maintain the privately-owned wastewater lift station at the property indicated above.

Air and Water Quality personnel conducted a site visit and confirmed that the on site privately-owned lift station did not have the required emergency contact information posted. This information is very important should a malfunction occur.

In accordance with the regulations, Air and Water Quality personnel advise you to post a 24-hour emergency contact number on the lift station.

In addition, should a discharge or spill of wastewater occur, Air and Water Quality should be notified at 941-861-5000 and spills in excess of 1,000 gallons must be reported to the STATE WARNING POINT TOLL FREE NUMBER 800-320-0519 as soon as practical, but no later than 12 hours from the time that you become aware of the circumstances.

I am sure you will agree that it is important to prevent pollution. Please help us keep our water clean and safe by properly operating and maintaining the lift station. Our goal is to protect our water resources, and together we can do it.

Please contact me to schedule a follow-up site visit after the sign is posted and if you have any questions, I can be reached at 941-232-8397 or dpouso@scgov.net.

Sincerely,

David Pouso
Environmental Specialist III
Air and Water Quality

C12PC.106

Storage Units
916 S. River Rd.; Englewood, Florida
PID 0850-05-0003
No Emergency Signage

Photograph taken by: Kathy Meaux, Environmental Specialist
Sarasota County
Date: February 2, 2012

SARASOTA COUNTY

"Dedicated to Quality Service"

August 13, 2012

Suncoast Worship Center Church of God Englewood
Joseph Taylor TTEE, Tom Laipply TTEE, Richard Dignazio TTEE, Property Owners
881 S. River Road
Englewood, FL 34223

Subject: Courtesy Notice Regarding a Private Wastewater Lift Station
881 S. River Road, Englewood, Florida 34223; PID 0850-12-0002

Dear Sir or Madam:

One of the reasons that Sarasota is such a special place to live is our water resources. The hundreds of waterways, streams, canals, and ponds all connect and eventually drain into our bays and estuaries. Simply put, what goes on the ground eventually ends up in our water. Every resident and visitor has a role to play in protecting our resources, and what you do on your property does make a difference.

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I am sure you will agree that it is important to prevent pollution. Please help us keep our water clean and safe by properly operating and maintaining the lift station. Our goal is to protect our water resources, and together we can do it.

Please contact me to schedule a follow-up site visit after the sign is posted and if you have any questions, I can be reached at 941-232-8397 or dpouso@scgov.net.

Sincerely,

David Pouso
Environmental Specialist III
Air and Water Quality

C12PC.107

Suncoast Worship Center
881 S. River Road, Englewood, Florida
PID 0850-12-0002
No Emergency Signage

Photograph taken by: Kathy Meaux, Environmental Specialist
Sarasota County
Date: February 2, 2012

SARASOTA COUNTY

"Dedicated to Quality Service"

August 13, 2012

Fairway Investments LLC, Property Owner
4524 Southlake Parkway, STE 2
Birmingham, AL 35244

Subject: Courtesy Notice Regarding a Private Wastewater Lift Station
55 N. Indiana Avenue, Englewood, Florida 34223; PID 0852-13-0007

Dear Sir or Madam:

One of the reasons that Sarasota is such a special place to live is our water resources. The hundreds of waterways, streams, canals, and ponds all connect and eventually drain into our bays and estuaries. Simply put, what goes on the ground eventually ends up in our water. Every resident and visitor has a role to play in protecting our resources, and what you do on your property does make a difference.

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Air and Water Quality personnel conducted a site visit and confirmed that the on site privately-owned lift station did not have the required emergency contact information posted. This information is very important should a malfunction occur.

In accordance with the regulations, Air and Water Quality personnel advise you to post a 24-hour emergency contact number on the lift station.

In addition, should a discharge or spill of wastewater occur, Air and Water Quality should be notified at 941-861-5000 and spills in excess of 1,000 gallons must be reported to the STATE WARNING POINT TOLL FREE NUMBER 800-320-0519 as soon as practical, but no later than 12 hours from the time that you become aware of the circumstances.

I am sure you will agree that it is important to prevent pollution. Please help us keep our water clean and safe by properly operating and maintaining the lift station. Our goal is to protect our water resources, and together we can do it.

Please contact me to schedule a follow-up site visit after the sign is posted and if you have any questions, I can be reached at 941-232-8397 or dpouso@scgov.net.

Sincerely,

David Pouso
Environmental Specialist III
Air and Water Quality

C12PC.108

Publix Shopping Center
55 N. Indiana Avenue; Englewood, Florida
PID 0852-13-0007
No Emergency Signage

Photograph taken by: Kathy Meaux, Environmental Specialist
Sarasota County
Date: February 2, 2012

SARASOTA COUNTY

"Dedicated to Quality Service"

August 13, 2012

Edward A. Joseph and Julissa Joseph, Property Owners
13383 Ingraham Boulevard
Pt. Charlotte, FL 33981

Subject: Courtesy Notice Regarding a Private Wastewater Lift Station
100 S. Indiana Avenue, Englewood, Florida 34223; PID 0503-08-0015

Dear Mr. and Mrs. Joseph:

One of the reasons that Sarasota is such a special place to live is our water resources. The hundreds of waterways, streams, canals, and ponds all connect and eventually drain into our bays and estuaries. Simply put, what goes on the ground eventually ends up in our water. Every resident and visitor has a role to play in protecting our resources, and what you do on your property does make a difference.

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Please contact me to schedule a follow-up site visit after the sign is posted and if you have any questions, I can be reached at 941-232-8397 or dpouso@scgov.net.

Sincerely,

David Pouso
Environmental Specialist III
Air and Water Quality

C12PC.109

Englewood Laundry
100 S. Indiana Ave.; Englewood, Florida
PID 0503-08-0015
No Emergency Signage

Photograph taken by: Kathy Meaux, Environmental Specialist
Sarasota County
Date: February 2, 2012

SARASOTA COUNTY

"Dedicated to Quality Service"

August 13, 2012

Royal Consolidation Properties, Inc., Property Owner
802 NW First Street
South Bay, FL 33493

Subject: Courtesy Notice Regarding a Private Wastewater Lift Station
200 S. Indiana Avenue, Englewood, Florida 34223; PID 0503-09-0051

Dear Sir or Madam:

One of the reasons that Sarasota is such a special place to live is our water resources. The hundreds of waterways, streams, canals, and ponds all connect and eventually drain into our bays and estuaries. Simply put, what goes on the ground eventually ends up in our water. Every resident and visitor has a role to play in protecting our resources, and what you do on your property does make a difference.

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I am sure you will agree that it is important to prevent pollution. Please help us keep our water clean and safe by properly operating and maintaining the lift station. Our goal is to protect our water resources, and together we can do it.

Please contact me to schedule a follow-up site visit after the sign is posted and if you have any questions, I can be reached at 941-232-8397 or dpouso@scgov.net.

Sincerely,

David Pouso
Environmental Specialist III
Air and Water Quality

C12PC.110

Englewood Center
200 S. Indiana Ave.; Englewood, Florida
PID: 0503-09-0051
No Emergency Signage

Photograph taken by: Kathy Meaux, Environmental Specialist
Sarasota County
Date: February 2, 2012

SARASOTA COUNTY

"Dedicated to Quality Service"

August 13, 2012

S & K Durrett LLC, Property Owner
11367 Dancing River Drive
Venice, FL 34292

Subject: Courtesy Notice Regarding a Private Wastewater Lift Station
473 S. Indiana Avenue, Englewood, Florida 34223; PID 0853-13-0002

Dear Sir or Madam:

One of the reasons that Sarasota is such a special place to live is our water resources. The hundreds of waterways, streams, canals, and ponds all connect and eventually drain into our bays and estuaries. Simply put, what goes on the ground eventually ends up in our water. Every resident and visitor has a role to play in protecting our resources, and what you do on your property does make a difference.

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Sincerely,

David Pouso
Environmental Specialist III
Air and Water Quality

C12PC.111

.

Provision Eye Center
473 S. Indiana Avenue; Englewood, Florida
PID: 0853-13-0002
No Emergency Signage

Photograph taken by: Kathy Meaux, Environmental Specialist
Sarasota County
Date: February 2, 2012

SARASOTA COUNTY

"Dedicated to Quality Service"

August 13, 2012

Charles Egar and Diana Egar, Property Owners
655 N. Indiana Avenue
Englewood, FL 34223

Subject: Courtesy Notice Regarding a Private Wastewater Lift Station
655 N. Indiana Avenue, Englewood, Florida 34223; PID 0496-08-0003

Dear Sir or Madam:

One of the reasons that Sarasota is such a special place to live is our water resources. The hundreds of waterways, streams, canals, and ponds all connect and eventually drain into our bays and estuaries. Simply put, what goes on the ground eventually ends up in our water. Every resident and visitor has a role to play in protecting our resources, and what you do on your property does make a difference.

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I am sure you will agree that it is important to prevent pollution. Please help us keep our water clean and safe by properly operating and maintaining the lift station. Our goal is to protect our water resources, and together we can do it.

Please contact me to schedule a follow-up site visit after the sign is posted and if you have any questions, I can be reached at 941-232-8397 or dpouso@scgov.net.

Sincerely,

David Pouso
Environmental Specialist III
Air and Water Quality

C12PC.112

Charles Eagar, MD Office
655 N. Indiana Avenue; Englewood, Florida
PID: 0496-08-0003
No Emergency Signage

Photograph taken by: Kathy Meaux, Environmental Specialist
Sarasota County
Date: February 2, 2012

SARASOTA COUNTY

"Dedicated to Quality Service"

August 13, 2012

Mark Grossenbacher, Principal
Englewood Elementary School
150 N. McCall Road
Englewood, FL 34223

Subject: Courtesy Notice Regarding a Private Wastewater Lift Station
150 N. McCall Road, Englewood, Florida 34223; PID 0497-10-0001

Dear Mr. Grossenbacher:

One of the reasons that Sarasota is such a special place to live is our water resources. The hundreds of waterways, streams, canals, and ponds all connect and eventually drain into our bays and estuaries. Simply put, what goes on the ground eventually ends up in our water. Every resident and visitor has a role to play in protecting our resources, and what you do on your property does make a difference.

The purpose of this letter is to remind you of your responsibility to properly operate and maintain the privately-owned wastewater lift station at the property indicated above.

Air and Water Quality personnel conducted a site visit and confirmed that the on site privately-owned lift station did not have the required emergency contact information posted. This information is very important should a malfunction occur.

In accordance with the regulations, Air and Water Quality personnel advise you to post a 24-hour emergency contact number on the lift station.

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Environmental Specialist III
Air and Water Quality

C12PC.113

Englewood Elementary School
150 N. McCall; Englewood, Florida
PID: 0497-10-0001
No Emergency Signage in View

Photograph taken by: Kathy Meaux, Environmental Specialist
Sarasota County
Date: February 2, 2012

Appendix C

Ranchette and Small Farm Workshop

January 13, 2013

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You're invited to a Ranchette and Small Farm Workshop!

January 23, 2013

Englewood Sports Complex
1300 S. River Road

5:30 to 7:30 PM

Guest Speaker: ***Dr. Robert Kluson of UF/IFAS Sarasota County Extension***

Appropriate Fencing

Did you know?

The Florida Department of Environmental Protection has determined Gottfried Creek to be impaired for fecal coliform bacteria.

What are fecal coliform bacteria?

Indicator bacteria that live in the digestive systems of humans and other warm-blooded animals.

Where do they come from?

Fecal coliform come from a variety of sources such as failing septic systems, stormwater runoff, human sewage, birds, wildlife, and farm animals such as chickens, cows, and horses.

What can we do?

Attend the workshop to learn recommended Best Management Practices (BMPs) for ranchettes and small farms to prevent fecal coliform bacteria from manure and other agricultural sources from entering Gottfried Creek Watershed and other water bodies.

Refreshments will be served.

Pasture Management

Waste Management

Disconnect from Water Bodies

Hosted by Sarasota County and The Florida Department of Agriculture and Consumer Services. For more information contact Kathy Meaux at kmeaux@scgov.net or Noel Marton@Noel.Marton@freshfromflorida.com

Sarasota County

FLORIDA

Fresh from Florida

Just a Reminder. Hope to see you there!

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Sarasota County

FLORIDA

Fresh from Florida

Hosted by Sarasota County and The Florida Department of Agriculture and Consumer Services. For more information contact Kathy Meaux at 941-650-1640 or kmeaux@scgov.net or Noel Marton@Noel.Marton@freshfromflorida.com

AGENDA

Gottfried Creek
Ranchette and Small Farm Workshop
January 23, 2013
5:30 – 7:30 PM

5:30 – 5:35	Welcome and Introductions – Kathy Meaux, Sarasota County
5:35 – 5:50	Purpose of Workshop – Kathy Meaux, Sarasota County
5:50 – 6:00	Noel Marton – Florida Department of Agriculture and Consumer Services
6:00 – 6:45	Best Management Practices for Ranchettes and Small Farms Dr. Robert Kluson – UF/IFAS Sarasota County Extension
6:45 – 7:00	Questions
7:00 – 7:15	BMP Sketch Sheet – Noel Marton and Kathy Meaux
7:15 – 7:30	Questions
7:30	Adjourn

Welcome to the Ranchette and Small Farm Workshop!

January 23, 2013

Gottfried Creek Ranchette and Small Farm Workshop

January 23, 2013

Hosted by Sarasota County and the Florida Department of Agriculture and Consumer Services

Kathryn L. Meaux
Sarasota County Water Resources

Sarasota County

Why Are We Here?

- *The Florida Department of Environmental Protection determined that Gottfried Creek is impaired for fecal coliform bacteria and adopted a TMDL*
- *Because we care about the water quality of Gottfried Creek*
- *To learn about how we can protect and improve the water quality of Gottfried Creek*

Sarasota County

Gottfried Creek Watershed

- An area of land that drains to a common waterway such as a stream, lake, estuary, bay, and ocean
- Gottfried Creek watershed relatively undeveloped
- Thomas Ranch occupies the upper third of the watershed
- Most of the development is in the lower two third
- Gottfried Creek drains to Lemon Bay

Sarasota County

What is a TMDL?

- *TMDL stands for Total Maximum Daily Load*
  - *The maximum amount of a given pollutant that a surface water can take in and still meet water quality standards that protect human health and aquatic life.*
  - *Water bodies that do not meet water quality standards for a specific pollutant are considered impaired for that pollutant.*
  - *TMDLS must be developed and implemented to reduce the pollutants and clean up the water body.*

Sarasota County

Evolution of TMDLs

- 1962 – Beginning of the Environmental Movement
  - Rachel Carson's *Silent Spring* was published
  - Led to creation of the Environmental Protection Agency
- 1972 – Clean Water Act
  - Goal of eliminating releases of toxic pollutants into surface waters
  - Established numerical values for pollutants to protect surface waters
  - Required states to develop a list of impaired waters
- 1986 - Department of Environmental Protection
  - State Agency
  - Created to coordinate and carry out pollution prevention and control activities

Evolution of TMDLs

- 1998 - List of Impaired Waters Created
  - 5-year cycles
  - Adopt TMDLs
- 2005-2008
  - Gottfried Creek samples
  - 5 stations
  - Fecal Coliform values exceeded WQ standard (400)
- 2010 – Gottfried Creek Fecal Coliform TMDL adopted
  - Local stakeholders work with DEP to identify and eliminate direct sources and identify potential sources and reduce or minimize bacteria in Gottfried Creek

Sarasota County

What are Fecal Coliform Bacteria and where do they come from?

- *Non-pathogenic indicator bacteria that live in the intestinal tract of humans and other warm-blooded animals*
- *Co-exist with pathogenic bacteria and can indicate their presence in the environment*
- *Cheaper to sample and analyze for indicator bacteria than the many pathogenic bacteria in existence*

Sarasota County

How do fecal coliform bacteria get into the environment?

Sanitary Sewer Overflows

Human Sources

Pet Waste

Failing Septic Systems

Stormwater

Sarasota County

Natural Sources of Fecal Coliform Bacteria

Wildlife

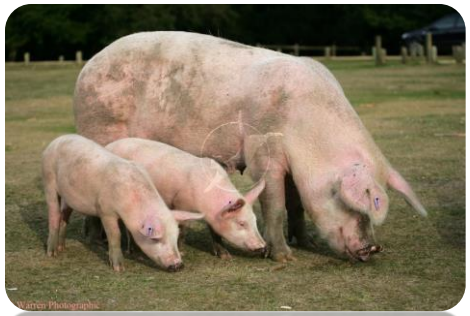
Sarasota County

Natural Sources of Fecal Coliform Bacteria

Birds

Sarasota County

Other Sources of Fecal Coliform Bacteria



Farm Animals

Sarasota County

Purpose of Workshop

- *Provide ranchette and small acreage farm owners with assistance and information about Best Management Practices (BMPs) for managing their property to protect the water quality of Gottfried Creek*

Sarasota County

Questions?

Sarasota County

UF/IFAS Extension

The Journey to Sustainability Begins with Education

Sarasota County
scgov.net | 941.861.5000 | TV19

UF/IFAS Sarasota County Extension
6700 Clark Road
Twin Lakes Park
Sarasota, Florida 34241
(941) 861-5000

UF UNIVERSITY of FLORIDA
IFAS Extension

Ranchette & Small Farm Workshop

Gottfried Creek Basin, Sarasota County, FL
January 23, 2013

Robert A. Kluson, Ph.D.
Agriculture/Natural Resources Agent III
UF/IFAS Extension Sarasota County

Outline

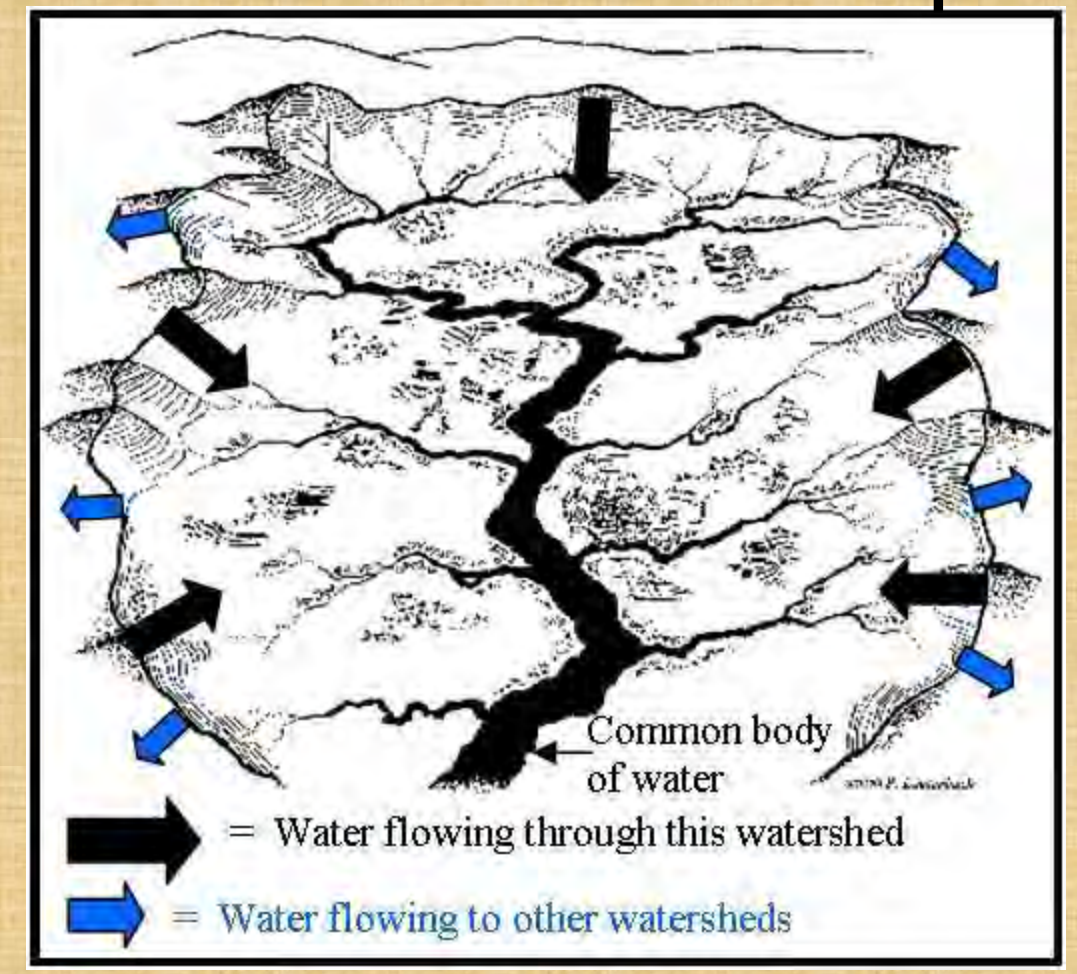
- Watersheds
- Best Management Practices (BMPs)
- Whole Farm Planning
- Manure Management
- Pasture Management
- Resources

Watershed

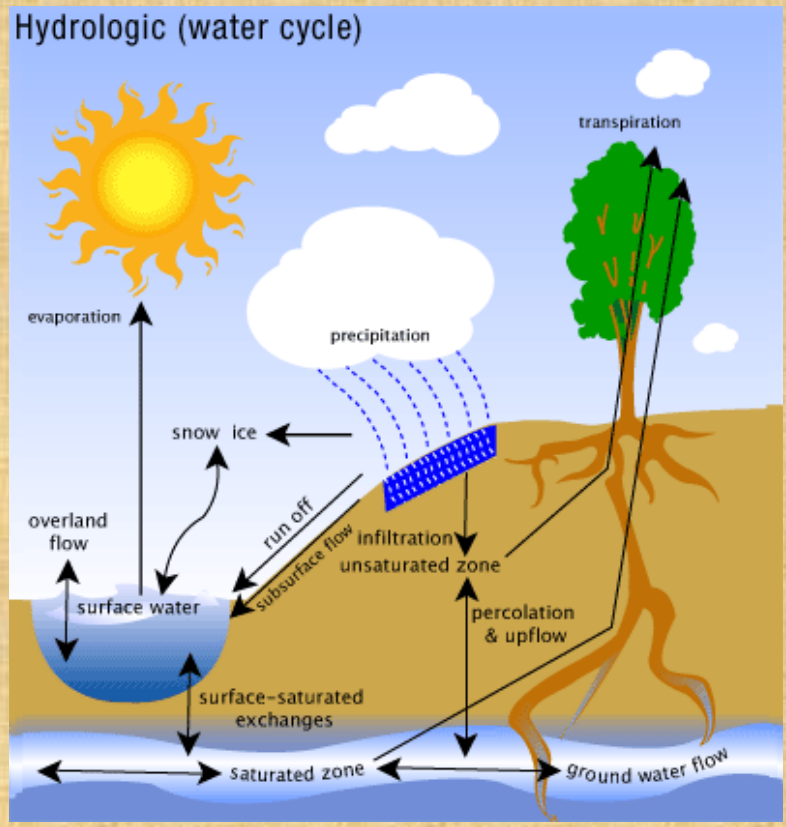
- **Question**: What is a watershed?

- **Answer:** A watershed is an area of land that water flows across as it moves toward a common body of water, such as a stream, river, lake or coast.

Watershed Concept

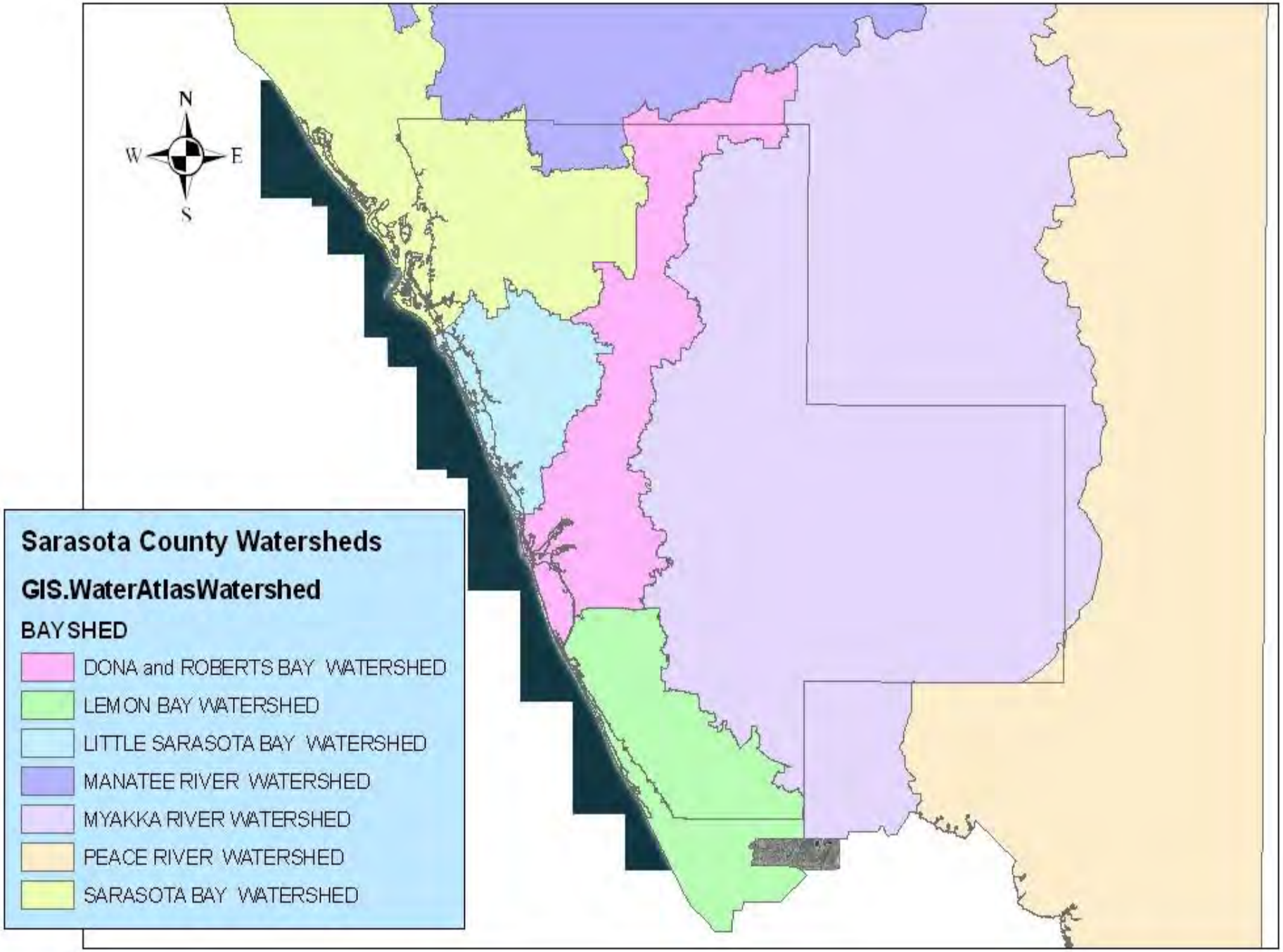


Water Movement

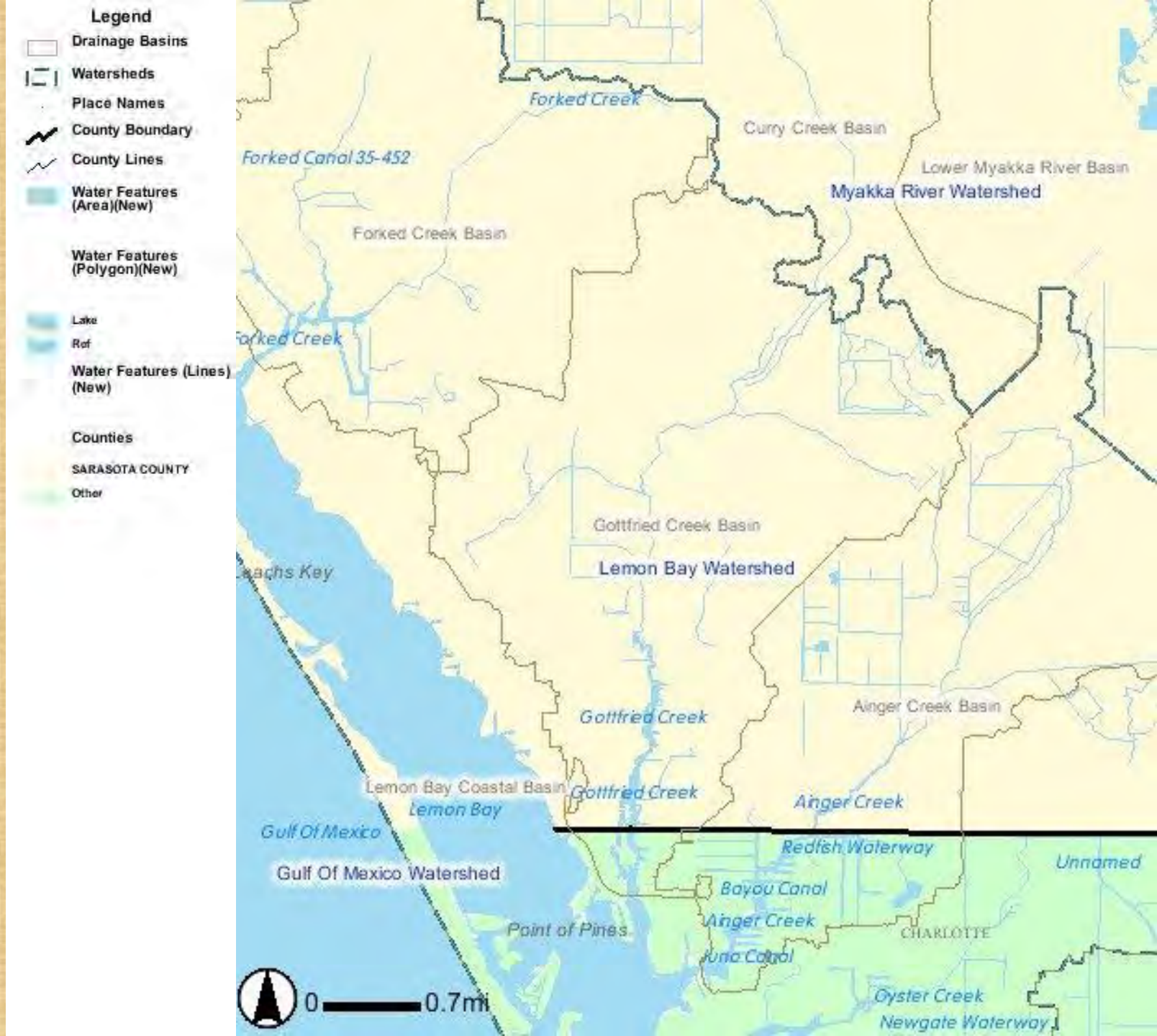


Other Names for Watersheds

- A river or lake basin
- A drainage
- A catchment area
- A greater (river) valley
- A river and its tributaries
- The headwaters area (for upper watershed)


N
W
E
S
Sarasota County Watersheds
GIS.WaterAtlasWatershed
BAYSHED
DONA and ROBERTS BAY WATERSHED
LEMON BAY WATERSHED
LITTLE SARASOTA BAY WATERSHED
MANATEE RIVER WATERSHED
MYAKKA RIVER WATERSHED
PEACE RIVER WATERSHED
SARASOTA BAY WATERSHED

Gottfried Creek Basin



- The Sarasota County Water Atlas is designed to provide
  - comprehensive and current water quality, hydrologic, and ecological data
  - information about recreational opportunities
  - a library of scientific and educational materials on water resource issues

- See http://www.sarasota.wateratlas.usf.edu/new/

Florida Best Management Practices (BMP) Program

- BMP definition
  - a practice or combination of practices determined by the coordinating agencies, based on research, field-testing, and expert review, to be the most effective and practicable on location means, including economic and technological considerations, for improving water quality in agricultural and urban discharges".

Florida Best Management Practices (BMP) Program

- Related issue
  - the Total Maximum Daily Load (TMDL), which specifies the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and allocates pollutant loadings among point and non-point pollutant sources to meet the requirements of the federal Clean Water Act
- BMPs are used as a voluntary program to meet the TMDLs

Historical Perspective

- BMP program concept accelerated with passage of the Florida Watershed Restoration Act in 1999.
- FDEP became the lead agency in charge of establishing TMDLs.
- 10 years later, BMPs have become “quasi-regulatory” in watersheds with a Basin Management Action Plan.

Agricultural Best Management Practices (BMP) Program

- Agricultural BMPs are guidelines advising producers how to manage the water, nutrients, and pesticides they use in order to minimize agriculture's impact on Florida's natural resources.
- BMPs are needed because agricultural activity is linked to the contamination of watersheds, water sourcs, and water bodies with nutrients.

Best Management Practices (BMP) Program

- Sources of agricultural nutrient contamination
  - Fertilizers – both chemical and organic (e.g., nitrogen and phosphorus)
  - Livestock wastes – both commercial and recreational
- Types of agricultural nutrient contamination
  - Point source pollution comes from a single source such as a pipe or ditch
  - Nonpoint pollution is the result of many small pollution sources – often called ‘runoff’

Lead Agency: **Department of Environmental Protection**

coordinates efforts with

Department of Agriculture
Office of Ag Water Policy

Leadership role for agriculture

Water Management Districts

Plus…Soil and Water Conservation Districts, Environmental groups, Local govt., Stakeholders, etc.

Best Management Practices (BMP) Program

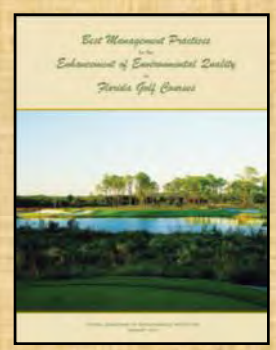
- BMP manuals are based on research
- Available for many forms of agriculture, as well as non-agriculture operations
- Online downloads – see http://bmp.ifas.ufl.edu/commodities.shtml

UF UNIVERSITY of FLORIDA IFAS

FDEP

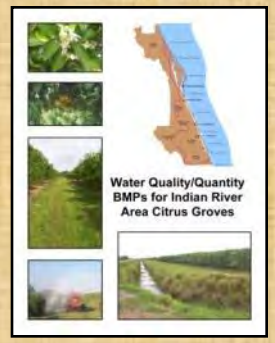
Green industries

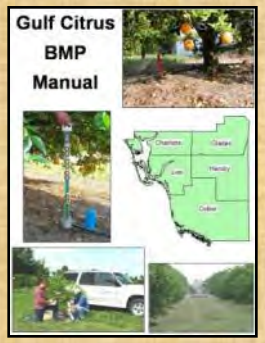
Golf courses

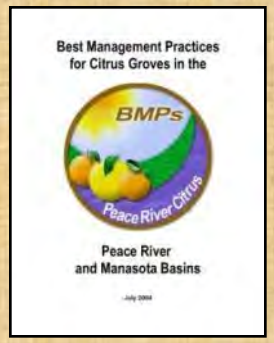


FDACS

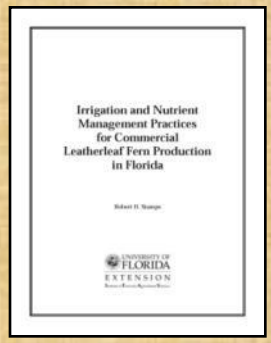
Citrus



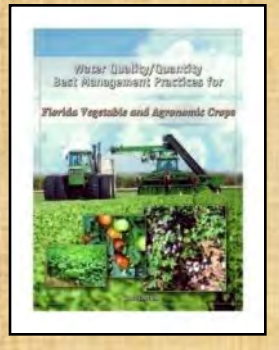




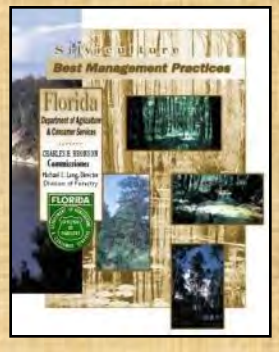
Nursery and Ferns



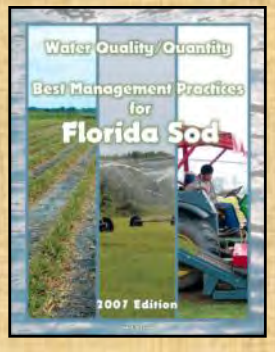
Vegetables and Row Crops



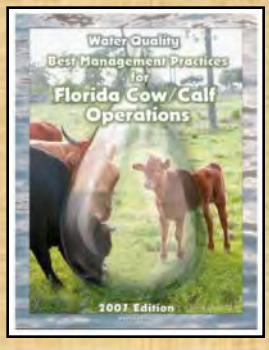
Silviculture



Sod



Cow/calf



Why BMPs for Ranchettes and Small Farms?

- Small and hobby farms and livestock operations — farms with minimal acreage and a few animals for recreation or for side income — are often owned by people who have little or no farming experience.
- Small livestock operations are increasing
  - According to the USDA 2007 Census, almost 300,000 new farms have begun operation since 2000.
  - More than 36% of farms are classified as "residential/lifestyle farms"—having sales of less than $250,000 and operators with a primary occupation other than farming. Another 21% are operated by individuals who are retired.

Why BMPs for Ranchettes and Small Farms?

- Traits of an increasing number of small livestock operations
  - located in suburban and urbanizing areas close to high density residential developments and water resources
  - the amount of land per animal unit is typically very small, often leading to problems associated with improper manure storage, handling, and use.
  - typically these operations are minimally regulated at the state & local level and lack access to information
- Education projects prove that small land owners and livestock owners want to do the right thing and learn how to better manage the manure from their operations

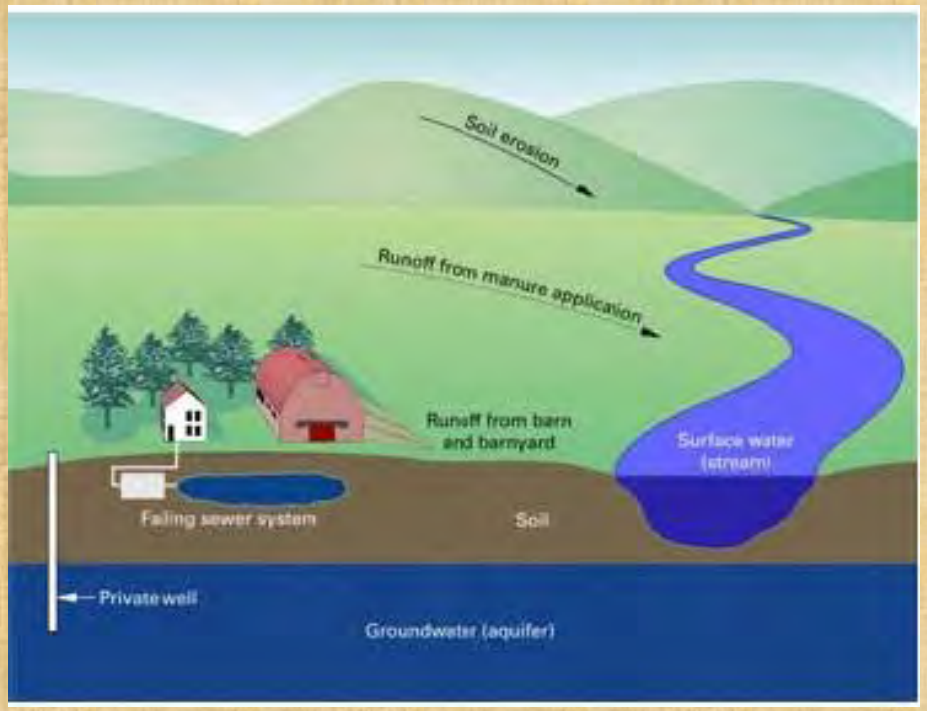
Manure Happens

- Valuable resource—if well managed.
- If Improperly managed—
  - Source of water pollution.
  - Can contaminate drinking water.
  - Odor issues.
  - Flies, parasites, & other nuisances.
  - Can harm livestock & wildlife.

Manure Really Happens!

4 horses in stalls = 160,000 pounds of manure & wet bedding per year.

Potential Sources of Manure Contamination of Watersheds



-Excessive field applications
-Soil erosion
-Runoff
-Septic systems

-Over grazing
-Fallow (bare) fields

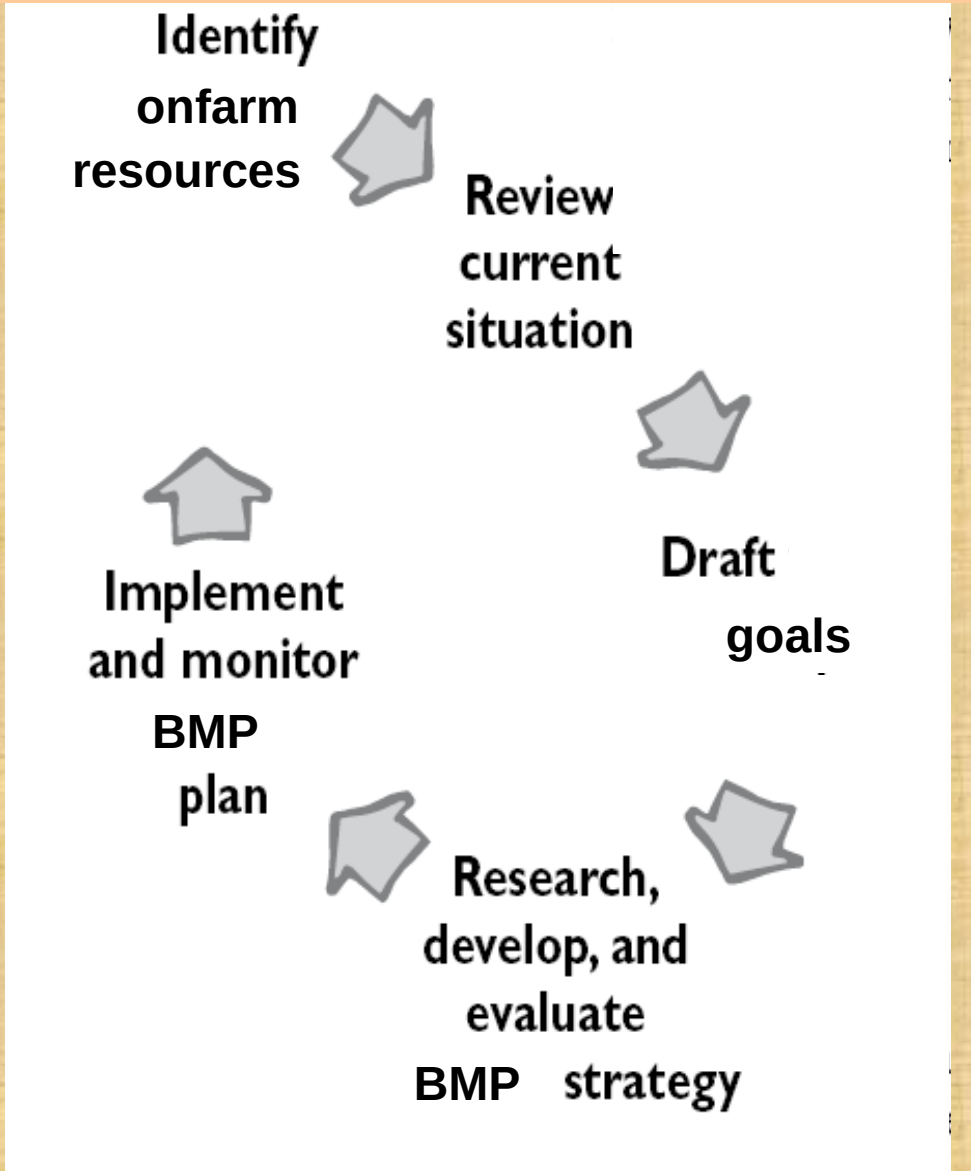
Goals of Manure Management

- Utilize manure nutrients for enhancing soil.
- Protect health and safety of the public and livestock.
- Prevent surface and ground water contamination.

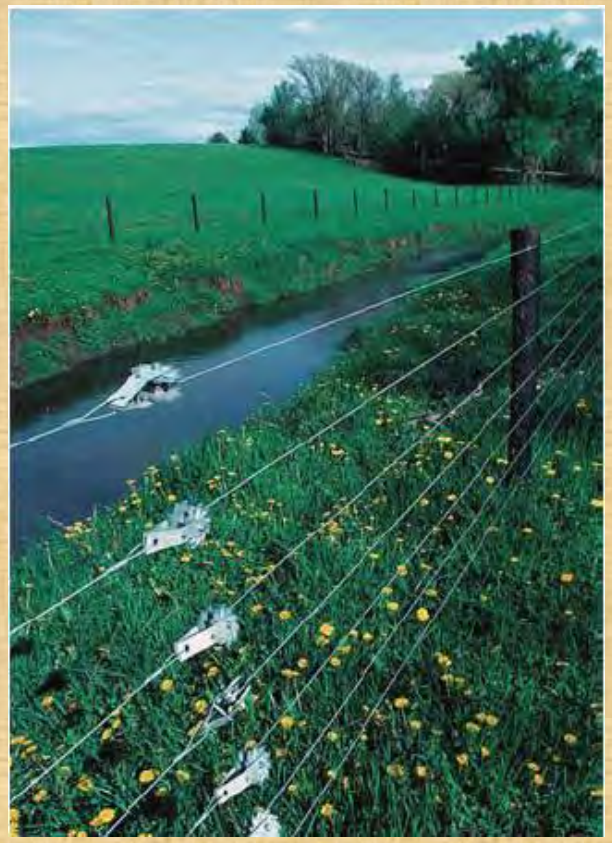
Whole Farm Planning

- A holistic approach to farm management involving the following steps:
  - inventory of onfarm soil/water resources and farm sketch of structure/operation locations
  - identify and prioritize environmental issues on and adjacent to a farm
  - careful structural planning & BMP implementation to reduce or avoid the transport of agricultural runoff offsite to farm watershed
  - monitoring and record keeping
  - annual review and repeat process

Whole Farm Planning Example
- Full Circle of Tasks & Processes -



Example Solutions to Livestock Manure Contamination of Watersheds



- fencing

limited access -

Example Solutions to Nutrient Contamination of Watersheds

- grass buffers along streams

agrofroestry riparian forest buffers -

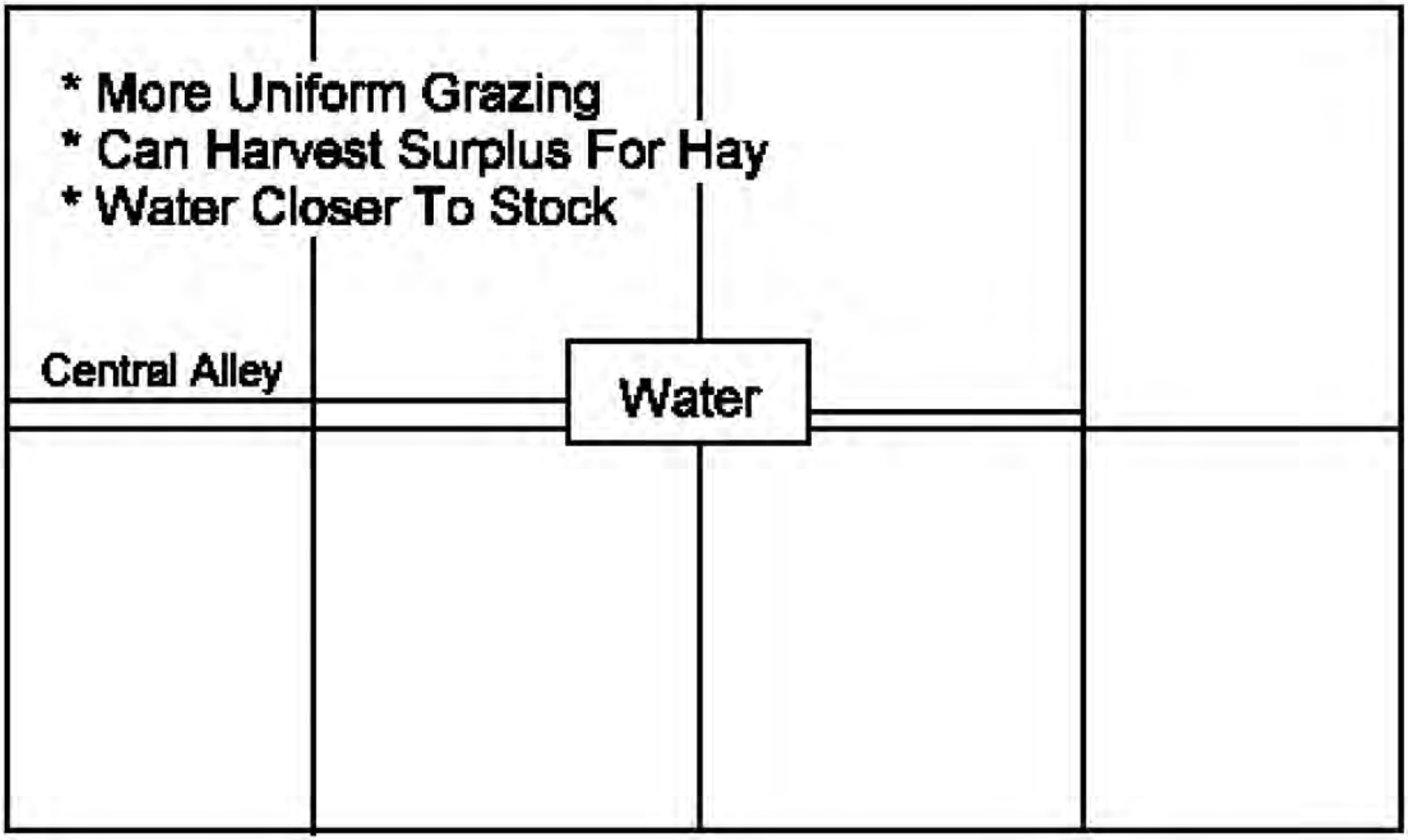
Example Solutions to Livestock Manure Contamination of Watersheds

Smart Grazing

- Subdivide pasture into two more areas.
- Rotate livestock so that grass is left standing at about 2 inches.
  - Allow grass to grow to about 8 inches before grazing animals on it again.

Smart Grazing System

Rotational Grazing



More Smart Grazing

- Multiple watering & feeding stations.
  - Moving stations will reduce erosion & manure buildup.
- Do not allow manure to build up in pastures.
  - Spread manure thinly & uniformly.
- Remove manure daily to every 3 days from heavily deposited locations.
  - Reduces parasite problems.
  - Reduces fly problems.

Drag Manure to Spread & Dry

Manure Storage: Size & Location

- Hold all the manure and bedding generated until it can be utilized.
- Setbacks.
  - 100 feet from wells, wetlands, and surface water bodies (streams, ponds).
  - 200 feet away from residences.
  - 50 feet from property lines.
- Downwind from stables/barns and neighbors' residences.
- Use shrubbery or fencing to screen.

Manure Storage: Structures

- Pile contained on a pad or in a small shed.
- Wooden or masonry “bucking wall” behind the pile.
  - Three bucking contains manure and leachate more effectively and makes handling easier.
- Structures for storing larger quantities of manure (e.g., more than a five horses, or AU equivalents).
  - Wooden or concrete storage sheds are options.
- Grassy or vegetated filter/buffer around storage.

Manure Storage: Pad & Covering

- Compacted earth or stone dust.
- Packed gravel, road base material, or crushed limestone base.
  - Farms with horses or larger numbers of animals.
- A rough-surfaced ramp.
- Cover to prevent run-off from the pile which can lead to water contamination.
  - Tarp
  - Permanent roof

Manure Storage

Other Storage Options

- Plastic garbage cans with lids, wood or metal bins, or carts.
- Manure spreader
  - Supplemental storage will be necessary.
- Dumpsters
  - Contract with a hauler.

Composting—Is it for you?

- Labor & time.
- Pitchfork & wheelbarrow.
- Front loader.
- Manure spreader.
- Thermometer.

Elements of Composting

- *Aeration*
  - Successful composting requires air or oxygen.
- *Nutrient balance and porosity*
  - 20 to 40 parts of carbon to one part of nitrogen.
- *Moisture*
  - 40 to 65 percent—like a damp sponge.
- *Temperature120° and 160°F.*
  - *131°F for 15 days to kill weed seeds & parasites.*

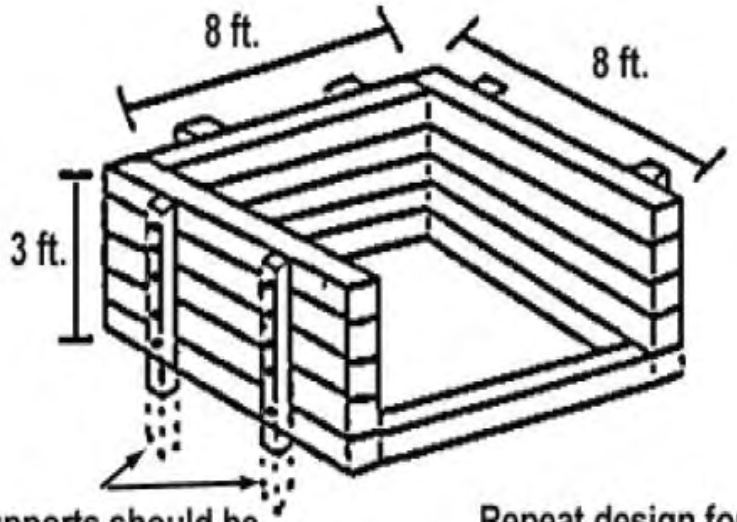
Advantages

- Typically can be done with existing farm equipment and available farm land.
- Improves manure handling.
  - Reduces volume.
  - Reduces moisture content.
  - Reduces odor.
  - Reduces fly & parasite problems.
  - More uniform & easier to handle or spread.

Advantages, continued

- Improved land application.
  - Nitrogen is more stable & released more slowly.
  - Weed seeds & pathogens destroyed.
- Soil conditioner.
- Can be used as a bedding for poultry litter & other livestock.
- Saleable product.
- Cost share money may be available from NRCS.

Compost Bins



Supports should be buried for stability

Repeat design for two or three stage system

3 Steps to Land Application

- Step 1: Start by getting to know your soil.
  - Soil test for the field or crop area where the manure is to be spread.
- Step 2: Know your manure & compost
  - See the ToolKit.
  - Get a nutrient analysis for nitrogen, phosphorus and potassium ("N-P-K").
    - Must be uniform sample.

3 Steps to Land Application, cont.

- Step 3: Consider crop needs
  - Use fertilizer or production guide to determine the nutrient needs .
  - Do not apply manure (and other fertilizers) at rates that exceed the amount necessary to meet crop nutrient needs in a growing season.

Table 1. Examples of available manure nutrients in pounds per animal per month.

Animals	N^1	P_2O_5	K_2O
	Pounds/month		
1,400-pound dairy cow	6	10	14
1,000-pound horse	3	3	6
500-pound dairy heifer	2	3	1

[1]Adjusted for N losses – 1/3 of total N.

Nutrient Traits of Manure Composts

	%			Org
	N	P205	K20	Matt
Average	1.73	0.85	0.92	42.8
Min	0.51	0.24	0.17	15.8
Max	3.49	2.63	2.58	83.7
Stdev	0.78	0.40	0.56	18.2
CV	45%	47%	61%	43%

UF UNIVERSITY of FLORIDA
IFAS Extension

IFAS Analytical Services Laboratories
Extension Soil Testing Laboratory

2390 Mowry Road / PO Box 110740 / Wallace Building 631, UF / Gainesville, FL 32611-0740
EMAIL: SOILSLAB@IFAS.UFL.EDU WEBSITE: SOILSLAB.IFAS.UFL.EDU

Nutrient Testing for Bahia Pastures

Important Information for Bahiagrass (crop codes 35 and 36)

There are two types of tests available for Bahiagrass pastures in Florida (see Table above for details)

Phosphorus Testing and Recommendation for Bahiagrass

- Soil tests alone are not adequate for determining P fertilization needs of Bahiagrass.
- A tissue and soil test must be submitted together to determine P fertilization needs.
- Phosphorus should not be applied if tissue P is at or above 0.15% even if soil tests Very Low or Low for P.
- If P recommendations are not desired and the producer only is interested in K, Mg, Ca levels and pH then a Standard Producer Soil Test will apply. This WILL NOT include P fertilizer recommendations.

Bahiagrass testing for new establishment plantings

- For crop code 35, only 1, 2 and 3 can be requested.
- Decisions concerning liming and N fertilization of bahiagrass pastures are very sensitive to cattle productivity and prices.

* **Crop Codes:**

- **35** – Bahiagrass establishment of new plantings; **Test 1** - standard soil test
- **36** – Bahiagrass, established with Low, Medium and High Nitrogen options – **Test B1** Standard Soil AND Tissue Test (pH, lime requirement, P, K, Ca, Mg) **OR Test 1**, Standard Soil test (pH, lime requirement, K, Ca, Mg and P test value ONLY)

** **N-Option:**

- Indicate Low, Medium, or High N Option, when requesting tests for **Crop Code 36**.

Fertilization Management for Bahiagrass Pastures:

✓For new plantings, apply only 100 lb N/A split as follows: apply 30 lb N/A, all of the P_2O_5, and 50% of the K_2O as soon as plants have emerged. Apply 70 lb N/A and the remaining K_2O 30 to 50 days later.

✓For bahiagrass pastures in central and south Florida, recent research has shown that P and K fertilization may not be economical. Furthermore, soil-test results may underestimate the soil supply of P. Choose to add P and K based upon economic considerations for your production system.

✓For established stands of bahiagrass, apply all of the fertilizer in the early spring to maximize much-needed spring forage. Bahiagrass is a very efficient forager and recovers nutrients from deeper in the soil profile than other popular forage grasses so danger of leaching losses is low.

Fertilization Management for Bahiagrass Pastures:

- Three fertilization options are presented below. Choose the option which most closely fits your fertilizer budget, management objectives, and land capability.

✓Low-Nitrogen Option. (for Grazed Pastures Only) Apply around 50 lb N/A this year, recognizing that N will be the limiting nutrient. Thus, do not apply P or K. Apply the P and K recommended by soil test every third or fourth year.

✓Medium-Nitrogen Option. Apply around 100 lb N/A this year. Apply 25 lb P_2O_5/A if your soil tested low in P and none if it tested medium. Apply 50 lb K_2O/A if your soil tested low in K and none if it tested medium. Re-test your soil every second or third year to verify P and K levels. If you plan to make a late-season cutting of hay, apply 80 lb N/A between August 1 and 15 (about 6 weeks before the growing season ends).

✓High-N Option. Apply 160 lb N/A and the soil-test-based recommended rates of P_2O_5 and K_2O for each of your pastures. The fertilization rates suggested in this option are high enough to allow bahiagrass pasture to achieve well above average production.

Off-Farm Manure Utilization

- Buy or rent more land.
- Off-site land application of manure.
- Off-site compost operation.
- “Free garden fertilizer.”
- Blended soil producers, organic farmers, home gardeners, mushroom growers, others.

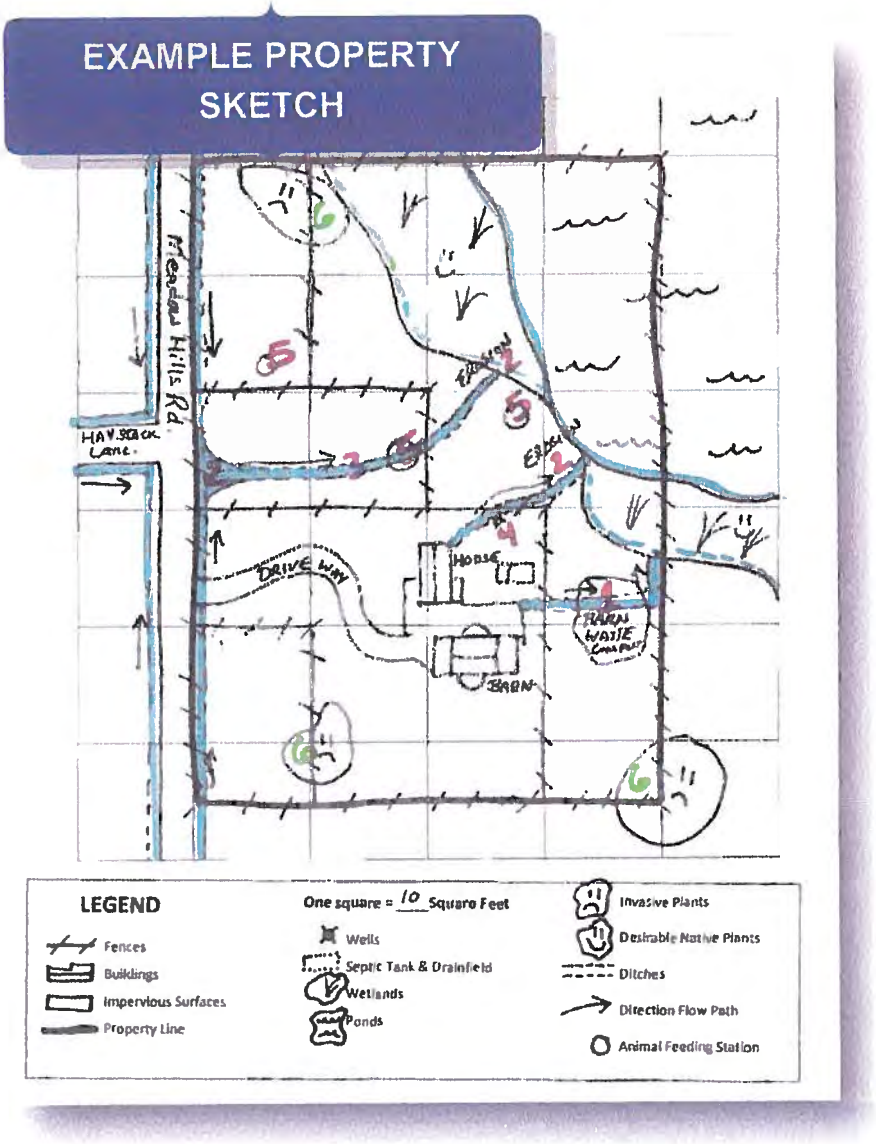
Whole Farm Planning & BMP Implementation Assistance

- UF/IFAS BMP Implementation Team
- Free watershed and conservation technical planning services by USDA/NRCS – see http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/technical/
- 'Mini-farms' program by FDACS – for farms 100 acres or less. Available for all counties within the Southwest Florida Water Management District. 75% reimbursement up to a Maximum of $5,000 – see http://www.swfwmd.state.fl.us/agriculture/mini_farms.php
- Sarasota County Extension office – see http://sarasota.ifas.ufl.edu/
- Online free course on "Whole Farm Planning and Water Quality" – see http://moodle.cce.cornell.edu/login/index.php

Reference and Online Resources

- EPA/National Agricultural Center: Watersheds – see http://www.epa.gov/oecaagct/awts.html
- eXtension. LPES Small Farms Facts Sheets – see http://www.extension.org/pages/8890/lpes-curriculum-small-farm-fact-sheets
- Northeast Recycling Council. Guide to Providing Manure Management Education to Small Farm and Livestock Operations – see http://www.nerc.org/manure_management.html
- UF/IFAS Solutions for Your Life: BMPs – see http://solutionsforyourlife.ufl.edu/hot_topics/agriculture/bmps.html
- USDA/National Agroforestry Center. Riparian forest buffers – see http://nac.unl.edu/riparianforestbuffers.htm
- Watershed Agriculture Council. Whole Farm Planning – see http://www.nycwatershed.org/ag_planning.html
- Whole Farm Planning with Holistic Management http://www.umass.edu/umext/jgerber/hmpage/hmpage2/mainpage6.htm

What a simple activity! After looking at water flows on our property and considering our management practices from an aerial perspective, I feel we can make some minor changes which will improve water quality.



1. First thing we plan to do is move our compost and barn mucking piles away from the ditch that drains the impervious surfaces on our property. We'd like to make the old site a water garden, capturing roof runoff and any nutrients still at the land surface from our many years of using this site.

2. The second thing we propose to do is to address the erosion. It is worst where the road ditches dump into our property and also at the end of the ditches near the wetlands. We can change the ditches to make sections divided by little berms which will slow down the flow and will hold some water back in each segment to allow the sediments to settle out before traveling to the pond.

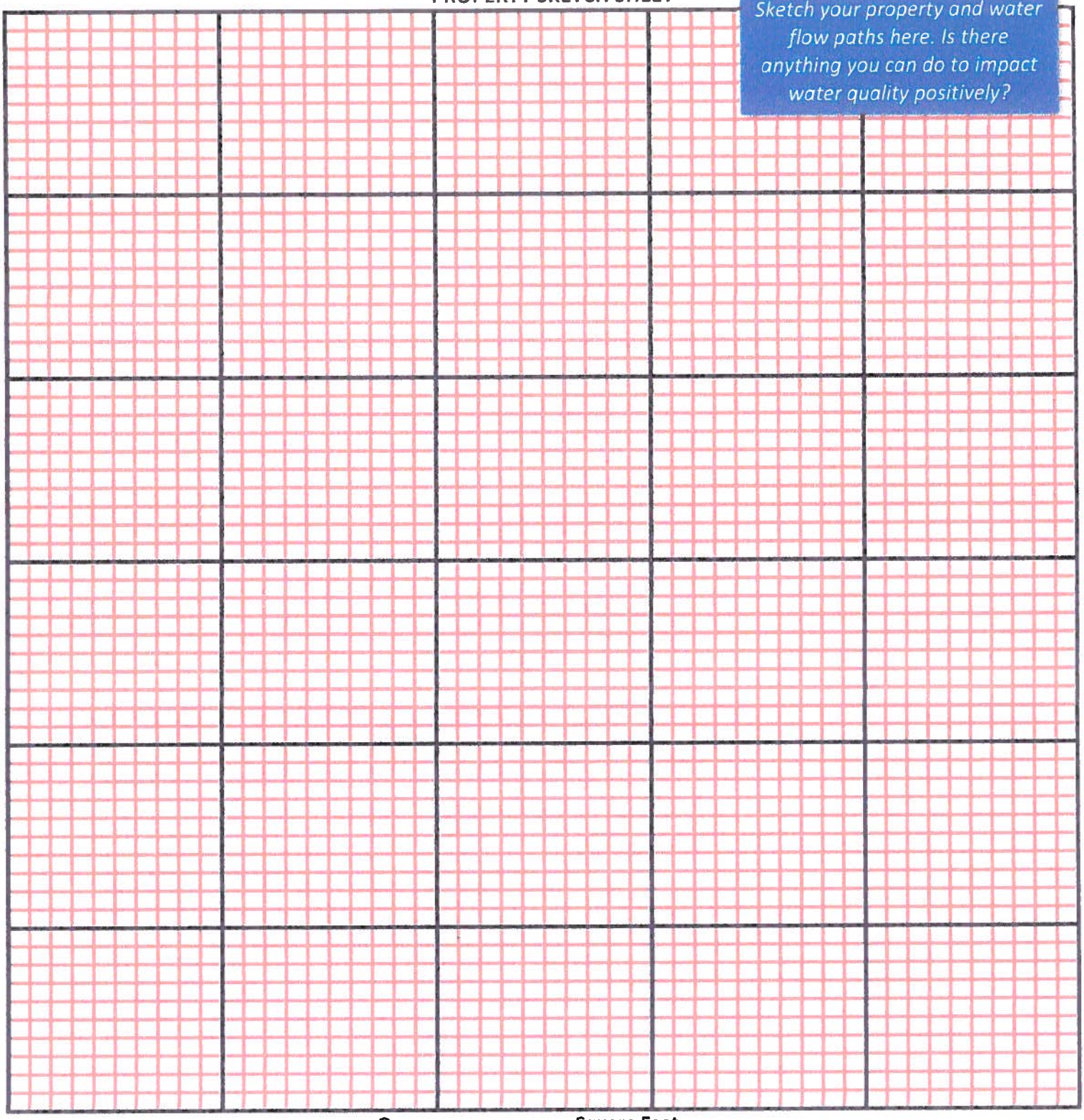
3. One of our main paddocks is divided by a ditch. We never thought about it this way before, but we need to start breaking up the cow dung so the sun can kill bacteria more quickly and so the nutrients will be more accessible to plants rather than large clumps of dung washing into the ditch and being carried to the swamp.

4. We didn't know that water on the yard near our well head can travel down the well casing and carry pollutants from the yard with it to our drinking water! We're re-routing the house run off away from the well.

5. Oh how easy it is to move the feeding areas. We're moving them up hill and away from the ditches, lake, and swamps.
6. Invasive weed patches. We'll be preventing the livestock from carrying seeds to new areas. Die weeds, die!
7. We've decided to provide alternate water sources in all the paddocks so the animals won't be disrupting the natural waterbodies.
8. And we've decided not to fertilize right up against the ditches and the swampy lake side.

PROPERTY SKETCH SHEET

Sketch your property and water flow paths here. Is there anything you can do to impact water quality positively?



One square = ____ Square Feet

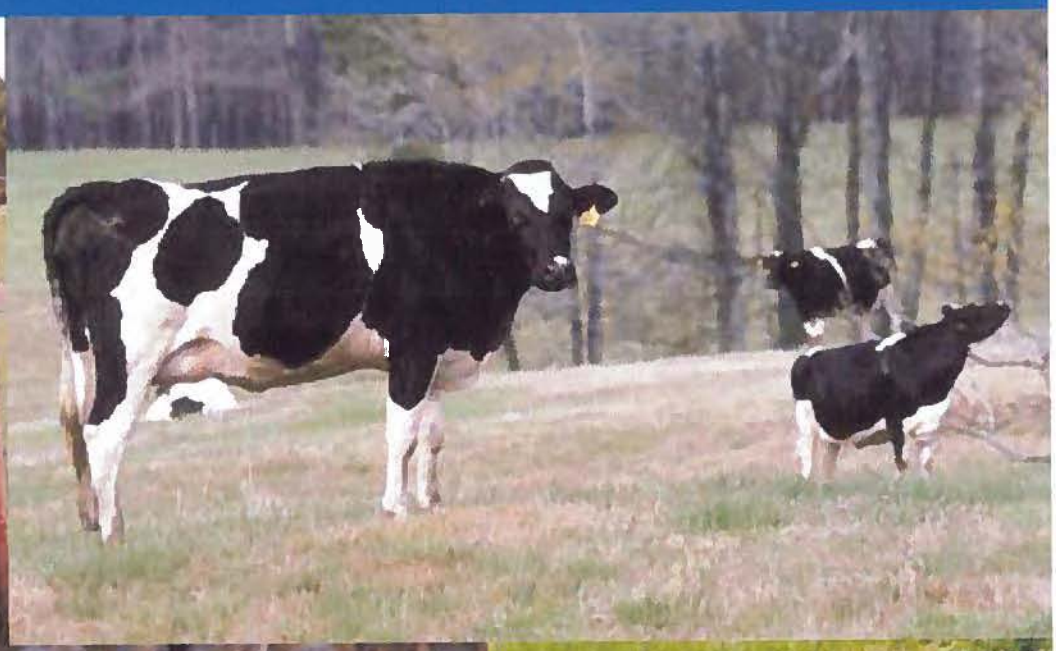
LEGEND

- Property Line
- Buildings
- Fences
- Impervious Surfaces
- Septic Tank & Drainfield
- Wells
- Lakes/Ponds
- Wetlands
- Ditches
- Invasive Plants
- Desirable Native Plants
- Manure Stockpile
- Animal Feeding Station
- Direction Flow Path

Sarasota County

Fresh Florida.

Good Neighbor Guidelines for On-farm and Offsite Application of Livestock Waste



SEPTEMBER, 2002

Good Neighbor Guidelines for On-farm and Offsite Animal Waste Management

PURPOSE

- Protect Florida's environment.
- Increase public understanding of the animal and agriculture industry.
- Improve community relations by implementing best management practices to address unwanted conditions associated with on-farm and offsite application of animal waste.

FLORIDA WATERS

Ground Water Protection

Ground water is one of Florida's most vital resources supplying most ecosystems and providing drinking water for 90% of the state's population. Since the state's geology makes ground water vulnerable to contamination, its protection is crucial. The agricultural industry can take steps towards effectively protecting Florida's ground water:

Stockpiling

Apply animal waste at agronomic rates to prevent the leaching of nutrients past the root zone. Dairies typically use liquid manure management systems where the solids have considerably fewer nutrients than effluent from wastewater storage lagoons. Be aware that agronomic rates may be exceeded by multiple applications and/or staging large piles of solids or sludge for an extended period of time in the fields.

Poultry operations and horse farms typically use dry manure management systems where the solids contain higher amounts of nutrients. Care should be taken to prevent over application of nutrients (See the Contacts and References section on page 7 for contact information related to managing agronomic rates.)

Composting

Poultry operations and horse farms often use composting to convert bedding and manure into a rich and odor-free soil amendment for use on the farm or for sale. Composting is a method whereby the organic component of the solid waste is biologically decomposed under controlled conditions to a state in which it can be handled, stored, and applied to the land without adversely affecting the environment. A key phrase in the above definition is "under controlled conditions." This distinguishes composting from the biological decomposition processes that occur naturally, and it also differentiates composting from some objectionable

practices such as open dumps, piles of rotting manure, and other accumulations of waste materials. The Department of Environmental Protection issues permits for solid waste composting operations, but not for routine farm activities. Check with DEP about options you are considering and whether a permit would be needed.

Waste Analysis

Use available laboratories for waste analysis to ensure agronomic rates are not exceeded. The **Livestock Waste Testing Lab** in Live Oak provides free analysis of livestock waste and can be contacted at (386) 362-1725. The **Florida Rural Water Association** at 1-800-872-8207 provides free assistance for collecting and transporting waste samples to the Live Oak laboratory. (See the back of this booklet for additional contact information for waste analysis and transportation.)

Manure Spreader Calibration

Spread waste evenly on fields or pastures to prevent high nutrient concentration areas. Use a calibrated manure spreader to spread waste; front-end loaders are not appropriate for waste application.

Planting Crops

To contain and use nutrients effectively, plant crops as soon as possible following the application of animal waste. If there is concern about ammonia toxicity effects on seed germination, contact a crop consultant.

Cover Crops

To recover and retain residual nutrients, use cover crops between cropping periods where possible.

Sinkholes

Maintain a sufficient non-application buffer zone and/or berm to prevent applied waste and rainwater in contact with waste from entering sinkholes. The recommended buffer zone width on level ground with good vegetative cover is 50'. If poor vegetative cover is present or anticipated, or if the soil surface slopes towards the sinkhole, then buffer zones up to 100' should be considered. (Contact the NRCS representative listed in the back for additional information regarding sinkhole buffers.)

Buffer Zone Vegetation

For optimal nutrient uptake in the buffer zone, use the recommended grass species for the soil series present and geographic location. On moderately drained soils establish a regionally appropriate improved Bermuda grass, and on slightly poor to poorly drained soils establish bahia grass. (Contact the NRCS or IFAS representatives listed in the back for additional information regarding appropriate buffer widths and grass species.)

Well Protection

Maintain a sufficient non-application buffer zone and/or berm to prevent applied waste and rainwater in contact with waste from entering wells or other potable water sources. Maintain a 200' non-application buffer zone around a private potable water source and a 300' buffer zone when the private potable water source is located down slope of the waste application site. A 500' buffer zone is required for potable community wells and water sources.

Surface Water Protection

With over 50,000 miles of rivers and streams, 7800 lakes, and 4000 square miles of estuaries, Florida has an abundance of surface waters that are used for a variety of purposes. Protection of surface waters is crucial towards safeguarding aquatic life and human health. Agriculture can take steps towards effectively protecting Florida's surface waters:

Agronomic Rates

Prevent any unnecessary discharge of nutrients to surface waters of the state by spreading animal waste and other fertilizers on crops or pastures at agronomic rates.

Timing of Waste Application

To prevent surface runoff of the waste to surface waters, do not apply animal waste before or during storm events or when the ground is saturated.

Non-Application Zones

Do not apply animal waste in or in close proximity of surface waters of the state, wetlands, stormwater ditches or any conveyance system that is connected with bodies of water.

Surface Water Buffer Zones

Maintain a sufficient non-application buffer zone and/or berm to prevent applied waste and rainwater in contact with waste from entering water bodies, streams, ponds, or wetlands. The recommended buffer zone width on level ground with good vegetative cover is 50'. If poor vegetative cover is present or anticipated, or if the soil surface slopes towards the water body, then buffer zones up to 100' should be considered. (Contact the NRCS representative listed in the back for additional information regarding buffer zones.)

REDUCING UNWANTED CONDITIONS

Improper application of animal waste can lead to unpleasant living circumstances for surrounding communities. Minimizing odors and managing waste appropriately illustrates a willingness to be a good neighbor.

Odors

Staging Solids in Fields

Manage offsite waste application areas to minimize odors and prevent the occurrence of nuisance conditions for surrounding neighbors. Avoid staging manure or spoiled feed in fields for longer than necessary. Staging times for manure or waste feed prior to land application should be kept to a minimum.

Meteorological Considerations

When possible, avoid spreading waste materials when conditions are present that would increase odors being carried offsite. Those conditions include stagnant periods, when there is minimal mixing (no odor dilution), and when residences are located downwind.

Incorporating Solids

To reduce odors, evenly spread and, where applicable, incorporate the solids into the ground. Use a calibrated manure spreader; front-end loaders are not appropriate for waste distribution. When possible, avoid spreading waste near residences on weekends.

Flies

Food Sources

Manage offsite waste application areas so flies are not presented with a highly concentrated food source. Fly food sources include spoiled silage, sand bedding, and manure solids; avoid staging piles in the fields for longer than necessary prior to land application.

Technical Assistance

If flies substantially increase in numbers following animal or silage waste application, immediately till waste into the soil or utilize a drag harrow. Contact University of Florida Entomologist Dr. Jerry Butler at (352) 392-1901, extension 152 for additional information. (Additional contact information listed in the back.)

Pesticides

If pesticide applications are necessary, follow all product application and safe handling guidelines provided by the manufacturer.

OTHER

Record Keeping

Importing & Exporting Animal Waste

Whether you are the provider or receiver of animal waste material, maintain a record of the day, amount, and source of waste removed from or brought to the site.

Field Application Records

Maintain records on nutrient application rates on a field-by-field basis. Use recent waste analysis or an estimated nutrient content of the applied waste to calculate application rates. (Contacts listed under the agronomic rate section of the contacts and references section can provide information related to nutrient application record keeping.)

Community Relations

Public Perception

The public may assume that standing piles of material from dairy farms, horse farms, chicken farms or any animal feeding operation consist wholly of manure. If piles of muck or bedding material, with low nutrient content, are to be staged for any length of time, notify neighbors that the piles are not manure and do not present a threat to ground water or the environment. Routinely spread piles with low nutrient content to avoid public misperception.

Public Education

If presented with the opportunity, inform surrounding neighbors that the application of animal waste is a beneficial reuse of a waste product, improves soil conditions and reduces the need for commercial fertilizer.

Contact Number

Provide surrounding neighbors with a business contact number to relay concerns.

Distribution of Guidelines

Regardless of who is responsible for management of the waste, improper handling will reflect badly on the source of the waste. If you distribute animal waste to other farmers or property owners, provide them with a copy of these guidelines.

Agency Contacts

If you receive complaints or concerns from the public regarding your application activities, contact the appropriate state agencies and local elected officials, and inform them of the situation.

Public Outreach Suggestions

Make available small quantities of manure for the neighbors to use in their gardens, flowerbeds, or newly established lawn. Sponsor local programs, organizations or youth leagues.

CONTACTS AND REFERENCES FOR ANIMAL WASTE MANAGEMENT

Argonomic Rates

- Natural Resources Conservation Services (NRCS)
  Steve Boetger, State Agronomist
  (352) 338-9548
  Website: http://www.fl.nrcs.usda.gov

- University of Florida Agricultural & Biological Engineering Dept.
  Dr. Roger A. Norstedt
  (352) 392-1864 ext. 103 Email: roger@agen.ufl.edu
  Website: http://www.agen.ufl.edu

- Florida Rural Water Association
  Jack Hodges, Agricultural Wastewater Technician
  1-800-872-8207 or (850) 668-2746 Email: frwa@ix.netcom.com
  Website: http://frwa.net

- Florida Department of Environmental Protection (DEP)
  Tallahassee Division of Water Resource Management (850) 487-1855 or
  contact the Industrial Wastewater Section of the nearest DEP district office.
  Website: http://dep.state.fl.us

Buffer Zones

- Natural Resources Conservation Services (NRCS)
  Greg Hendricks, State Resource Conservationist
  (352) 338-9543
  Website: http://www.fl.nrcs.usda.gov

Composting

- University of Florida Agricultural & Biological Engineering Dept.
  Dr. Roger A. Norstedt
  (352) 392-1864 ext. 103 Email: roger@agen.ufl.edu
  Website: http://www.agen.ufl.edu

- Florida Backyard Composting Tutorial and Information
  Website: http://compost.ifas.ufl.edu/

- Composting Horse Manure
  SS-ANS-001E. A. Ott, E. L. Johnson, R. A. Nordstedt
  http://edis.ifas.ufl.edu/BODY_AN040

- On-Farm Composting of Poultry Litter
  P&SS Info # 319, Walker, F.
  http://www.agriculture.utk.edu/ansci/poultry/PSS319.htm

- A Practical Guide for Composting Poultry Litter
  MAFES Bulletin 981 published June, 1992. Brake, J. D.
  http://www.msstate.edu/dept/poultry/complit.htm

- Florida Department of Environmental Protection (DEP)
  Tallahassee Solid Waste section (850) 488-0300 or contact the Solid Waste Section of the nearest DEP district office. Website:
  http://www.dep.state.fl.us/waste/categories/solid_waste/pages/composting.htm

Fly Control

- University of Florida Entomology and Nematology Dept.
  Dr. Jerry Butler
  (352) 392-1901 ext. 152 Email: jfb@gnv.ifas.ufl.edu
  Website: http://entnemdept.ifas.ufl.edu

Laboratories (free assistance)

- Livestock Waste Testing Lab (analysis free of charge - except for grant-funded research)
  Justin Jones, Research Coordinator
  7580 CR 136
  Live Oak, Florida 32060
  (386) 362-1725 Email: JTJones@mail.ifas.ufl.edu
  Website: http://nfrec-sv.ifas.ufl.edu

- Florida Rural Water Association (FRWA) (transporting samples - free of charge)
  Jack Hodges, Agricultural Wastewater Technician
  1-800-872-8207 or (850) 668-2746 Email: frwa@ix.netcom.com
  Website: http://frwa.net

Other Contacts

- Florida Department of Agriculture & Consumer Services (FDACS)
  Website: http://doacs.state.fl.us

- Local Water Management District
  Website: http://www.dep.state.fl.us/secretary/watman/wmd_map.htm

- Florida Cooperative Extension
  Website: http://edis.ifas.ufl.edu/

* This document was produced with the cooperation of the Florida Dairy Industry, dairy consultants, various state agencies listed above, and other livestock industry stakeholders.

* Please distribute these Good Neighbor Guidelines to applicable businesses, farms, dairies, and homeowners.

* These guidelines may be subject to revision based on new information or improved management practices.

Cover Photos courtesy of USDA-NRCS, Ellen McCarron, and the William H. Lane family.

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Phosphorus is not the only stormwater pollutant in our regional drainage canals. Think about how many people live here and the household habits that may contribute pollution to the region's stormwater. What do you think rainwater picks up as it rolls across parking lots, lawns and pastures before draining into stormwater systems like a swale, pond or canals? Just imagine chemicals leaking from vehicles on roadways; inappropriately applied fertilizers and pesticides on urban landscaping; or, mismanaged pet and livestock waste. It all adds up…

LIVING CLOSE TO THE EVERGLADES REQUIRES EVERYONE TO BE A WISE RESOURCE MANAGER

The primary goal of equine "Best Management Practices," or "BMPs," is to eliminate or limit excess phosphorus, nitrogen and other pollutants produced by horses and livestock from entering canals and waterways through inappropriate pasture and stable practices. Besides ensuring better water quality for you, your livestock, neighbors and the Everglades – these equestrian BMPs will also help you maintain better pastures, improve livestock health and increase property values. Additionally, adopting BMPs will help protect you from related code enforcement problems.

Horse owners, equestrian facility managers, the South Florida Trail Riders Association, and Florida Farm Bureau have worked together with the South Florida Water Management District, the Florida Department of Agriculture & Consumer Services and the University of Florida Institute of Food and Agricultural Sciences (IFAS) to develop these recommended practices.

YOU CAN LEAD A HORSE TO WATER

South Florida's Water Quality Challenge

Our regional system of drainage canals provides flood control and allows us to live in areas that were once part of the Everglades. Stormwater from the 50 to 60 inches of rain we receive annually drains across our property collecting pollutants before it is discharged into drainage canals. Depending on where you live, stormwater in nearby drainage systems is either discharged to the Atlantic or the Everglades.

Any number of pollutants can be found in stormwater, but in southeast Florida where urban drainage canals discharge into the Everglades, the stormwater pollutant of concern is primarily phosphorus – a nutrient most commonly found in fertilizers. Stormwater discharges into the Everglades with phosphorus concentrations higher than 10 parts per billion (ppb) can upset the natural balance of the Everglades system.

Achieving the restoration of the Everglades will require a significant reduction in the amount of phosphorus in stormwater. Improving the water quality of stormwater runoff is the responsibility of everyone that contributes pollutants.

IMAGINE 10 BLACK MARBLES IN A POOL OF A BILLION WHITE MARBLES—THAT'S WHAT 10 PARTS PER BILLION LOOKS LIKE. AND ALTHOUGH IT IS OK FOR DRINKING WATER TO HAVE HIGHER CONCENTRATIONS OF PHOSPHORUS, THE EVERGLADES IS NATURALLY A "NUTRIENT-POOR" NATURAL SYSTEM. EVEN SMALL AMOUNTS OF UNNATURAL NUTRIENTS CAN UPSET THE NATIVE PLANTS AND ANIMALS THAT DEPEND ON THE HISTORIC RIVER OF GRASS.

GOOD HORSE SENSE

PROTECTING WATER RESOURCES

Equine Best Management Practices (BMPs) for Southeast Florida

APPROPRIATE FENCING

To reduce erosion and avoid water quality degradation, strategic location of your fences needs to be considered before installation.

- Ideally, install fencing to allow for rotation and resting of pastures
- Fence off areas that receive periodic standing water where possible
- Fence to prevent access of horses to canals or bodies of water connected to canals. And, provide alternative sources, like a water trough
- Fence along a canal or other surface water so that a buffer strip of vegetation will be created naturally to filter run off and prevent soil erosion
- Regular inspection and ongoing maintenance of fences should be part of the farm management plan
- The location and construction of all fences and its materials should comply with local, state and federal laws

PREVENTING SOIL EROSION

Exposed soil – meaning areas without vegetative cover – is susceptible to soil erosion. Besides being detrimental to property values, soil erosion allows soil sediments to drain into nearby surface waters. Eroded sediment can have high levels of phosphorus. Erosion and sediment control practices will prevent surface water quality problems and retain the property's valuable topsoil.

- Maintain a vegetative buffer strip between paddocks or pastures and canals and roadways
- Construct berms where appropriate
- Use pasture management practices

PASTURE MANAGEMENT

- Where appropriate, consider subdividing large pastures into smaller ones and develop a rotational grazing system
- Maintain grass on pastures by rotating grazing areas, and make sure there is a [livestock drinking] water source for each pasture
- Overgrazing occurs when 50% or more of the plant has been removed all at once. This causes a stoppage of root growth and reduces grass production
- Confine animals for a portion of the day to prevent overgrazing
- Allow rest periods and use a high-intensity, short duration grazing technique to rejuvenate poor pasture
- Mow regularly to encourage grass and reduce weeds (1 year's seed is 7 year's weeds)
- Allow pasture grass to reach 6 inches in height before grazing and remove animals when 3 inches height remains
- Mow pastures to a uniform 3 inches height after grazing to stimulate equal growth of all plants

Fertilize Pastures according to Broward Turf & Landscaping BMPs:

- If you are not an experienced landscape professional, use a "slow release" form of fertilizer. Because it has been manufactured to release nutrients gradually, slow-release fertilizers will significantly reduce the potential for runoff and leaching. Most commercial fertilizers are a blend of slow release and quick release nutrients. Fertilizer having a high percentage of slow release nutrients has a reduced potential for environmental impact and damage to pastures.
- Use fertilizer with appropriate amounts of nitrogen, phosphorus and potassium
- Before using a fertilizer containing more than 2% phosphorus, do a "soil test" to determine if it justifies adding phosphorus
- Read the fertilizer label completely and conscientiously – and do not over apply
- Apply fertilizer on appropriate schedules of three small applications yearly rather than one single application, and reduce application rates in the summer wet season whenever possible
- Watch the weather before fertilizing. Whenever possible, postpone fertilizing when a precipitation of greater than 1 inch of rain is expected to reduce fertilizer loss and stormwater pollution

WEED MANAGEMENT

Weeds spread rapidly. Regular inspection of your property is critical and involves immediate action using one or more weed control practices:

- Search for individual weeds and promptly remove, especially near water bodies or wetlands
- Avoid moving livestock from a weedy area to a weed-free area for at least 24 hours
- Mow weeds regularly before they go to seed
- Drag as needed to aerate the pasture manure with soil to encourage pasture growth, and use manure management practices

GOOD HORSE SENSE

To begin the BMP process, examine your property or where your livestock is boarded. Make a sketch showing property boundaries, fences and confinement areas, buildings, wells, septic system and drain field, wetlands and ponds, bare ground, and weeds and Non-native and invasive plants and vegetation. Also consider areas that are landscaped or pastured, neighboring land uses, ground contours and soil type.

Studying the property sketch, think about possible pollution sources. Is there a possibility that animal waste from the property might be entering canals and waterways? Could soil erosion on the property be making its way to neighboring properties or nearby surface waters? Is the pasture pond connected to a nearby canal, lake or wetland? Is the correct fertilizer being used for South Florida soils and semi-tropical environment – and what about pesticide usage, and the current system of waste management?

MANURE MANAGEMENT

Remove manure from stalls daily. Do not allow excess manure to accumulate in paddocks, corrals or pens.

- Spread manure on pastures at allowable rates using a spreader designed for the purpose
- Drag as needed to aerate the manure with soil to encourage pasture growth
  - Do not over-apply. Contact the local County Extension Agent to determine allowable agronomic rates.
  - Do not use manure spreader within 10 feet of canals or roadways
- Maintain a good deworming program for livestock to prevent parasites and worm eggs in manure that will be reapplied to pastures
- Compost manure to create topsoil/fertilizer
- Create two manure piles: one active, one dormant
- Position manure piles away from canals/roads/neighboring residence's plot lines
- Utilize composted manure on lawns, gardens or pastures as fertilizer
- Create compost piles or containment areas away from canals, roads and neighboring residences
- Compost piles should be enclosed by a border at least 8 inches high and covered with an impervious surface to prevent leaching (such as a sheet of plastic)
- Arrange a manure pick-up service. Or arrange times for neighbors, gardeners, and nurseries to collect composted manure

MUD CONTROL

Mud is a slick, unsafe footing and harbors insects and bacteria, which cause illness and disease in livestock. A muddy farm is unsightly for the neighborhood and causes an increase in odors and flies. Mud can also be damaging to the environment by contaminating surface water with sediment runoff. The idea behind mud-control BMPs is to prevent mud from making its way into nearby surface water.

- Install gutters and downspouts on all buildings and divert away from confinement areas
- Maintain a grass strip – as wide as possible – around corrals, stalls or other confinement areas to serve as a filter for mud runoff
- Use suitable footing material in high-traffic areas

DISCONNECTING WATER BODIES

Where appropriate, keep pasture ponds separate from surface waters. Remove any existing drainage ditches or pipes that allow water from ponds or lakes on the land to enter canals or roadways. In other words, do not create drainage links between pasture ponds and nearby canals and other waterways, as well as to roadway swales or paved areas. But before disconnecting water bodies, contact your local drainage district or regulatory agency to determine that disconnecting the water body will not conflict with specifications or requirements from local regulations, permits or easements.

STORMWATER MANAGEMENT

A healthy wetland area reduces erosion and provides a good habitat for fish and wildlife as well as reducing pollution by filtering out unwanted nutrients and chemicals. Grazing in areas adjacent to canals, ponds and wetlands can destroy natural vegetation. Some suggested alternatives for maintaining healthy buffers are:

- Where feasible, construct berms on your property to retain stormwater and prevent runoff
- Create buffer strips of vegetation along canals and roadways on your property to filter run off and prevent soil erosion
- Maintain your property's existing slopes away from canals and roadways
- When managing your farm or landscaping your property, remember that you should never change the grading of slopes that drain into canals, waterways or lakes. The grading is based on state and local minimum requirements and was designed by a State of Florida Registered Professional Engineer to meet water quantity and quality criteria
- Properly maintain water retention areas on your property:
  - Check your permit and or easement and follow specifications
  - Leave a "ring of responsibility" around pasture ponds [retention areas] by not fertilizing close to the water. This untreated area will serve as a natural buffer zone
  - Remove exotic and invasive vegetation from retention areas
  - These species can produce dense growth and decaying matter that threaten water quality
- Create drainage ditches to channel water from any catchment areas away from canals and roadways and to a water retention area

Southwest Florida Water Management District

Small Acreage Farm & Ranch

Best Management Practices for *Protecting Florida's Water*

Do You Own a Small Acreage Farm or Ranch?

Most small acreage farms or ranches (often called ranchettes or farmettes) are rural properties, usually under 10 acres, where part of the land is used for agricultural purposes, including crops, livestock and horses.

For example, if your home is on several acres and you also have a horse on the land, your property could be considered a ranchette or farmette.

Your Role in Protecting Water Resources

As a ranchette or farmette owner, you play a significant role in protecting Florida's water resources. Some common land-use practices can potentially degrade these resources.

For example, improper irrigation techniques not only place stress on water supplies, but can also damage your property and your neighbor's property by causing erosion, flooding, etc. Storm water or irrigation water that runs off your land may carry pollutants from manure, fertilizer and pesticides into local water bodies. Uncontrolled animal access to water bodies can introduce harmful animal waste into the water supply.

Best Management Practices (BMPs) for Ranchettes and Farmettes

BMPs are tested methods, measures or practices designed to prevent or reduce harm to the environment. The BMPs listed in this brochure are practical and cost-effective ways to minimize pollutants entering water bodies, while also improving your land.

How Can BMPs Help You and Help Protect Florida's Water Resources?

- Improve crop/animal health
- Maintain better pastures
- Protect your land from soil erosion
- Manage weeds and control mud
- Increase property values
- Protect you from related code enforcement problems
- Reduce irrigation, fertilizer and herbicide costs
- Contribute to the improvement of Florida's water quality
- Contribute to the improvement of Florida's groundwater and surface water levels

Irrigation BMPs

- Wells used for irrigation should be constructed by a licensed driller
- Schedule irrigations according to soil moisture and crop water needs
- Adjust irrigation amounts to meet varying crop demands at different growth stages
- Apply irrigation uniformly and accurately; do not overspray onto impermeable surfaces

Fertilization BMPs

- Test soil to determine exact fertilizer needs
- Properly calibrate fertilizer application spreaders
- Apply fertilizer directly over root zone; for row crops, place fertilizer on top of beds; for pasture or field crops, fertilize the entire planted area
- Avoid applying fertilizer near roadways or water bodies
- Minimize overlapping fertilizer during application

Pasture BMPs

- Do not overstock your land with more animals than it can handle — follow the recommendations and guidelines of the University of Florida's Institute of Food and Agricultural Sciences
- Use high-intensity, short-duration grazing to rejuvenate poor pasture
- Allow grass to reach 6 inches before grazing; remove animals when 3 inches remain
- Mow regularly to encourage grass and discourage weeds
- If available, fertilize pastures according to site-specific soil test recommendations or the guidelines of the University of Florida's Institute of Food and Agricultural Sciences

Fencing BMPs

- Fence off or limit animal access to natural water bodies
- If needed, pipe water from streams or lakes to a trough located away from the water body
- Fence off animal access to areas that receive periodic standing water
- Use fences to divide pastures into temporary plots for rotational grazing

Stormwater BMPs

- Maintain vegetation buffers around animal confinement areas
- Locate animal confinement areas away from water bodies
- Divert uncontaminated surface and roof runoff away from animal facilities
- Construct berms to retain storm water on your land
- Maintain existing slopes away from canals and roadways
- Create drainage ditches to channel water away from water bodies and roadways and into a water retention area
- Direct storm water away from wellhead
- Ensure standing water does not pool around wellhead

Erosion Prevention BMPs

- Allow vegetative buffer strips to grow along water bodies
- Do not leave bare soil exposed to the effects of erosion
- Prevent overgrazing by confining animals for a portion of the day or using rotational grazing

Drainage BMPs

- Keep pasture and constructed ponds separate from natural water bodies
- Do not create drainage links between constructed ponds and nearby water bodies

Pasture Weed Control BMPs

- Frequently search for weeds
- If weeds are discovered, either pull them or use a herbicide recommended by the University of Florida's Institute of Food and Agricultural Sciences for the specific weeds
- Buy only hay that is free of weed seeds
- Plant only certified grass seed
- Mow weeds regularly before they go to seed
- Wash your vehicle after being in a weed-infested area
- If using herbicides, avoid spraying on windy days and near water bodies
- Do not spray herbicides immediately before, during or immediately after a rainfall

Manure BMPs

- Store manure in covered areas protected from weather
- Do not allow excess manure to accumulate in animal confinement areas
- Do not accumulate or store manure in low-lying areas where water collects
- Drag pastures as needed to aerate manure and soil using the recommended rates of the University of Florida's Institute of Food and Agricultural Sciences
- Spread manure at allowable rates using a spreader designed for the purpose
- Do not spread manure within 10 feet of canals or roadways
- Compost your manure to improve the fertilizer value
- For excess manure, use a manure pickup service or arrange times for gardeners or nurseries to collect composted manure
- Maintain a good deworming program for animals

Mud Prevention BMPs

- Maintain a grass strip around animal confinement areas
- Use suitable foot material (such as paving stones or rocks) in high-traffic areas
- Install gutters and downspouts on all buildings and divert them away from animal confinement areas

Septic Systems

Properly maintained septic systems help protect the environment by reducing pollution. As a homeowner, you are responsible for maintaining your septic system. You should have your septic system inspected every two to three years and pumped as needed. For more information on proper septic system maintenance, visit *WaterMatters.org/publications* to read the brochure entitled "Your Septic System Is Your Responsibility."

Florida-Friendly Landscaping

In addition to following these BMPs for your pasture and/or farmland, remember that a properly maintained Florida-friendly yard can help you conserve water and reduce pollution of water resources. For more information on Florida-friendly landscaping, contact your local county Extension office (telephone numbers on next page) or visit *WaterMatters.org/yards/*.

Need More Information?

For additional information on ranchette and farmette BMPs and Florida-friendly landscaping, visit the University of Florida Institute of Food and Agricultural Sciences Extension web site at *extension.ifas.ufl.edu/* or contact your county Extension office at:

Charlotte: (941) 764-4340

Citrus: (352) 527-5700

DeSoto: (863) 993-4846

Hardee: (863) 773-2164

Hernando: (352) 754-4433

Highlands: (863) 402-6540

Hillsborough: (813) 744-5519

Lake: (352) 343-4101

Levy: (352) 486-5131

Manatee: (941) 722-4524

Marion: (352) 620-3440

Pasco: (352) 521-4288

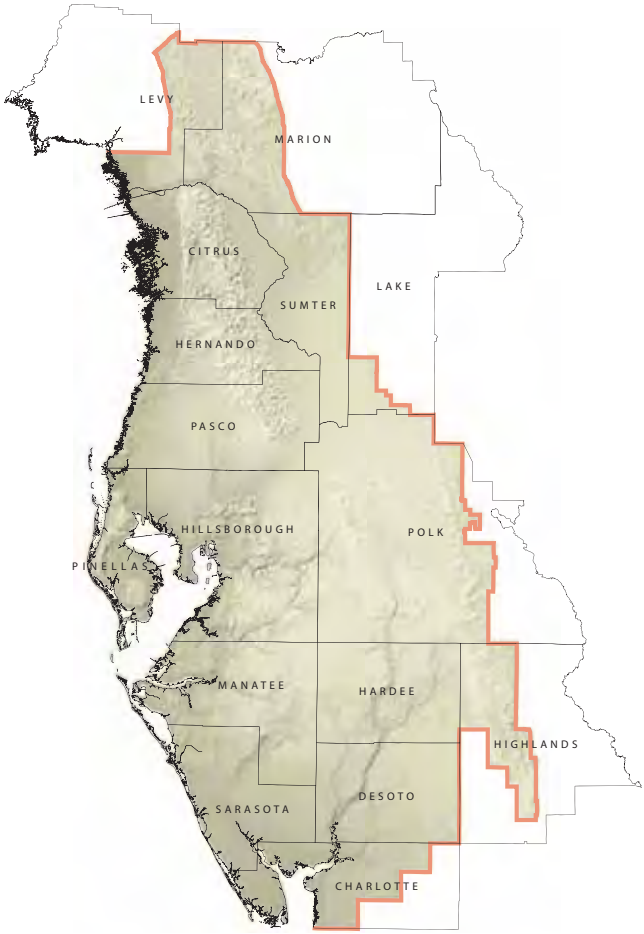
Pinellas: (727) 582-2100

Polk: (863) 519-8677

Sarasota: (941) 861-5000

Sumter: (352) 793-2728

For technical assistance on implementing ranchette and farmette BMPs, contact the USDA's Natural Resources Conservation Service at (352) 338-9500, or visit their web site at *www.fl.nrcs.usda.gov/*.



Southwest Florida
Water Management District

WATERMATTERS.ORG · 1-800-423-1476

For a variety of free publications about protecting Florida's water resources, call 1-800-423-1476, ext. 4757, or visit *WaterMatters.org/publications/*.

This information will be made available in accessible formats upon request. Please contact the Communications Department at (352) 796-7211 or 1-800-423-1476 (FL only), ext. 4757; TDD only at 1-800-231-6103 (FL only).

VISPT0049 10-06

Managing Horse Manure by Composting

Lori K. Warren, Ph.D., Department of Animal Sciences

Key Points:

- *Properly prepared compost has many uses as a growing media, soil amendment, or slow-release fertilizer.*
- *Composted manure is more attractive than uncomposted stall waste, making it easier to give away or sell.*
- *Composting kills intestinal parasite eggs and larvae and destroys weed seeds, reducing the risk of re-infection if compost is spread on pastures.*
- *A well-managed manure pile can be composted in 2 to 3 months.*

Basic components needed for composting:

- ✓ Horse manure!
- ✓ Adequate space
- ✓ A mechanism for getting air into the pile
- ✓ A source of water
- ✓ A source of additional nitrogen (if needed)
- ✓ A bulking agent or high-carbon source (if needed)

UNIVERSITY OF FLORIDA
IFAS

Why Compost?

The average horse generates over 9 tons of manure each year (or even more if bedding is included). Managing such large volumes of manure can often be a challenge for many horse owners, particularly for those who may not have enough land to dispose of raw manure by spreading on pastures.

Although not a disposal method, composting offers horse owners one way to increase the value of horse manure. The heat generated by microorganisms living in the manure pile will destroy weed seeds and parasite larvae and eggs, making compost more attractive to gardeners and nurseries as a growing media or soil amendment. Composting also benefits the environment by stabilizing the nutrients in manure, making them less likely to be potential pollutants to surface or ground water. Compost can be applied to pastures as a slow-release fertilizer, reducing the risk of parasite re-infection, as well as the need for chemical fertilizers. Composting also reduces the odor and fly problems commonly associated with manure and decreases the volume of waste horse owners will have to dispose of by half.

Building a Composting System

Although composting can be accomplished with free-standing piles or windrows, most horse owners find they have better control of the process (and thus, faster composting) when manure and stall waste are placed in bins or some type of enclosure. Containing the pile also makes it easier to reduce the risk of water pollution from runoff or leaching.

Bins constructed from 2 x 6" (untreated) boards and heavy-duty posts will work best for most horse facilities. Materials need not be new; you may find suitable wood planks, concrete blocks, or other materials recycled from other farm/home improvement projects that can assist in containing the pile. The floor of each bin should be constructed of impermeable clay or concrete. A gravel access is convenient for loading or using a wheelbarrow to bring the manure to the heap. Covering the compost bins with a permanent roof, plastic sheet or tarp is recommended. Protecting the pile from rainwater will help you to regulate the proper moisture level, as well as reduce the risk of rain leaching contaminants from the pile and creating a pollution hazard.

At least two bins are recommended for small operations that support just a few horses, or for those with no mechanical equipment. In this scenario, the first bin is filled to capacity and periodically turned and mixed with a shovel or pitchfork to promote composting. When the first bin is full, materials can be added to the second bin.

Larger facilities, or those equipped with a small tractor or front-end loader, should consider building three or more bins. A series of bins allows the containment of waste at different stages of the composting process. In a three-bin system, manure and bedding are piled into bin one until it's full, then shifted into bin two for holding and composting. Meanwhile, bin one can be refilled. When bin one is full again, materials in bin two are shifted into bin three, and materials in bin one are shifted into bin two. Shifting material from one bin to the next serves as part of the turning and mixing process. Ideally, by the time bin one is full again, materials in bin three will be completely composted.

Determining Bin Size

The size of your compost bins will be dictated by the amount of manure and bedding produced, how long the materials will remain in the bin, and any equipment the bins will have to accommodate. In general, you should plan for at least 4 to 6 months of manure storage for composting.

Step 1: Calculate the amount of manure and bedding produced

An 1100-lb horse produces 50 lbs or one cubic foot of manure (urine + feces) each day. If manure is mixed with bedding, the volume can increase to 2 – 3 ft^3 (or more). You can also count the number of wheelbarrow loads generated from stall cleaning each day and estimate the volume of each load.

Step 2: Determine how long the materials will remain in the bin

The use of only one or two bins usually means the materials will remain in the bins for longer periods (3 to 6 months). When using three or more bins, each bin should provide enough space to house material generated for about a one or two-month period. The volume of material in each bin will decrease over time as materials degrade, so subsequent bins may be slightly smaller if necessary.

Example Calculation: 2-Bin System for a Small Operation	
Number of horses	2
Volume of manure and bedding generated each day	2 ft^3/horse X 2 horses = 4 ft^3
Total storage capacity (number of months)	4 months (120 days)
Amount of manure generated	4 ft^3/day X 120 days = 480 ft^3
Number of bins	2
Size of <u>each</u> bin	480 ft^3 / 2 bins = 240 ft^3 240 ft^3 = 8 ft X 8 ft X 4 ft

Locating Your Compost Pile

Your composting system should be located on a fairly flat site, away from low lying areas, to prevent storm water from pooling and carrying away potential water contaminants. In addition, your compost site should be situated away from springs or wells (minimum distance 300 feet) and open bodies of water, such as streams, lakes, rivers and wetlands (minimum distance 100 feet). Although a well managed system will not have a foul odor or attract flies, be considerate of your neighbors by locating your bins out of view and downwind. Remember to allow room to maneuver mechanical equipment (if used). You may also wish to situate the pile near a water hydrant for ease of adding moisture when needed.

Managing Your Compost Pile

Management of the pile can be kept simple or be quite sophisticated, and should be customized to fit your specific situation. However, if you devote some time and energy to managing the pile correctly, you will produce better quality compost in a faster period of time.

Remember that composting is a flexible process—it will occur over a broad range of conditions. Decomposition will take place even if a compost pile doesn't contain the "ideal" mixture of ingredients or is ignored after it has been built, but at a slower rate. Trial and error is an essential part of successful composting, so do not feel discouraged if the process is not going as you anticipated. By monitoring your compost pile regularly, you can learn what is needed to improve the process. Most adjustments are very simple and problems are easily corrected.

1. Amassing the pile

Add manure and bedding directly to the compost pile as you clean your horse stalls. This is also the best time to add water if needed. Manure picked up from riding rings, arenas, trails and corrals can also be added directly to the pile. Avoid picking up too much dirt along with the manure and keep all trash out of the pile. A minimum pile size of one cubic yard (about the size of a standard washing machine) is needed to achieve composting temperature.

2. Monitoring the temperature of the pile

Effective composting temperatures range from 130 – 150°F. The center of a properly made heap should reach such temperatures within a week during the summer, or may take up to a month in cooler seasons. To destroy parasites and weed seeds, temperatures of 130 – 150°F should be maintained for at least 21 days. Piles that are too cool (below 130°F) break down more slowly and don't kill parasites or weed seeds. Piles that are too hot (above 160°F) kill the composting microorganisms and result in an extremely foul-smelling pile. The temperature of the compost pile should be monitored every 2 to 3 days to ensure active composting is taking place. Long-stemmed compost thermometers are available at most hardware and garden supply stores and are a relatively inexpensive investment.

3. Turning and mixing the pile

Microorganisms involved in composting need air. In addition, the most active site of composting takes place in the hotter center of the pile. Therefore, turning not only helps to aerate the pile, but also ensures that weed seeds and parasites in the cooler sections are destroyed by bringing them into the center to "cook."

Depending on your composting system and the amount of manure generated, the pile can be mixed and turned by hand with a pitchfork, or mechanically with a small front-end loader. Frequent turning accelerates the composting process; the more it's turned, the faster it breaks down. Turning may be done on a weekly or monthly basis, or may be based on the measured temperature of the pile. If using temperature as a guide, piles should be turned when temperatures fall to 100°F or when they rise above 150°F.

As an alternative to frequent turning, you may also elect to "passively aerate" your compost by inserting PVC pipes that have ½-inch holes drilled along each pipe at 6" intervals. These perforated pipes can be stuck down into the pile like chimneys, or inserted horizontally and layered along with the manure as the pile grows. Occasional turning of the pile may still be needed to get manure on the outside into the center so the heat from the composting process can destroy parasites and weed seeds. Please note that it may take longer to compost manure aerated by PVC pipes compared to a pile that is actively mixed on a regular basis.

4. Adding water to the pile

All materials in the pile must be moist, but not soaking wet. Moisture can be gauged by squeezing a handful of compost. Compost that contains an adequate amount of moisture will feel like a freshly wrung out sponge. If water runs out of the pile or if you can squeeze water from a handful of compost, it is too wet. In this case, you will need to add straw, tree leaves, shredded bark, or old hay to dry the pile. If it doesn't feel moist, you need to add water. Consider watering your compost with a garden hose when you turn it. Or, an easy way to add water is to hose down the manure in your wheelbarrow before you dump it into the pile, if it's needed. Make it a habit to check the moisture content of the pile on a regular basis.

5. Amending the Pile with Nitrogen

By itself, horse manure contains the ideal mixture of nutrients and moisture for composting. However, quite often the manure horse owners would like to compost contains bedding. Bedding primarily contributes carbon to the compost pile, which can offset the amount of nitrogen provided by the manure. The more bedding you remove with manure during stall cleaning, the more likely you will need to add supplemental nitrogen to maintain the composting process, particularly with wood bedding (chips, shavings, sawdust, etc). Commercial fertilizers, such as urea, ammonium nitrate, or another high-nitrogen fertilizer, can be added to the pile to provide additional nitrogen. Ideally, nitrogen should be sprinkled on each wheelbarrow load of manure dumped on the pile each day. Alternatively, nitrogen can be mixed into the pile when it is turned. Refer to the table below for guidelines on amending the compost pile with nitrogen.

Guidelines for amounts of supplemental nitrogen to add per ton (2000 lbs) of stall waste using common sources of nitrogen.

Manure : Bedding Ratio (by weight)	**Type of bedding**	**Nitrogen Source** (% N)		
		Urea (46% N)	**Ammonium Nitrate** (33% N)	**Calcium Nitrate** (15% N)
1 part manure : 1 part bedding	Straw or Hay	None	None	None
	Wood shavings	20 lbs	30 lbs	60 lbs
1 part manure : 2 parts bedding	Straw or Hay	15 lbs	20 lbs	40 lbs
	Wood shavings	30 lbs	40 lbs	90 lbs

Is it Ready?

A well-managed manure pile will be completely composted in as quickly as 60 days. The average time to completion for most horse owners is 120 days. Piles that don't have enough nitrogen, water or air, or those that aren't maintained, break down much more slowly, taking 6 to 12 months or more.

Finished compost will not heat up after routine turning and mixing. Compost will smell "earthy" and look like rich soil.

Putting Compost to Use

After you have successfully produced compost you need to think about what you will do with it. Composted manure is often a more attractive product than raw manure, making it easier to give away or sell to others if you cannot use it yourself. Properly prepared compost has many uses, including:

- **Soil Amendment**. Composted horse manure can be used to increase the organic matter content and the water and nutrient-holding capacity of sandy and heavy clay soils.
- **Growth Media**. Finished compost can be used by plant nurseries as potting soil and is an excellent media for the production of mushrooms, roses and fishing worms.
- **Mulch**. Compost can be a valuable mulching material for garden and landscape plants. And if used as mulch, the compost need not be completely finished.
- **Slow-release Fertilizer**. When applied to lawns, cropland or pastures, finished compost can supply a modest amount of nutrients that will be released slowly over time. Since compost is already broken down, it does not deplete the soil of nitrogen needed by plants to grow. Nitrogen depletion can occur when uncomposted manure is spread on fields. And because composting kills parasites and weed seeds, the risk of re-infection is reduced. Additional fertilization may be necessary to obtain acceptable growth yields when compost is applied as fertilizer.

Trouble Shooting

Symptom	Cause	Solution
Compost pile will not get hot	Pile may be too dry	Add water
	Pile may contain too much bedding (carbon)	Add fertilizer or manure to supply more nitrogen
	Pile may be too wet	Add more bulking materials; cover from rain
	Pile may be too small	Build a bigger pile
Compost has foul smell	Pile may be too wet	Add more bulking materials and turn pile
	Pile may need more air	Turn the pile more often
	Pile may contain a dead animal	Remove the carcass
Compost pile doesn't seem to be breaking down	Pile may be too dry	Add water
	Pile may be too small; not holding heat	Build a bigger pile
	Pile might not contain enough nitrogen	Add fertilizer or manure to supply more nitrogen

Sarasota County

February 5, 2013

NAME
ADDRESS
CITY, STATE, ZIP

Subject: Gottfried Creek Ranchette and Small Farm Workshop

Dear:

We just wanted to say that we missed you at the Ranchette and Small Farm Workshop held at the Englewood Sports Complex on January 23, 2012.

Dr. Robert Kluson, the Natural Resources and Agricultural Extension Agent ~~of~~ for Sarasota County, gave an excellent presentation describing how Agricultural Best Management Practices (BMPs) can be used as guidelines for managing run-off of water, nutrients (fertilizers), pesticides, and animal wastes ~~on~~ from ranchettes and small farms to minimize impacts on Florida's natural resources.

Since the Florida Department of Environmental Protection determined Gottfried Creek to be impaired for fecal coliform bacteria, the main focus of the workshop was to provide property owners with information about proper pasture and waste management techniques. These BMPs are designed to prevent fecal coliform bacteria from entering Gottfried Creek through either direct (intentional discharge) or indirect (stormwater runoff) pathways.

We encourage you to take an inventory of your property using the enclosed property sketch sheet to identify flow patterns across your property and to devise simple, inexpensive solutions to prevent pollutants from reaching ponds, ditches, canals, and, ultimately~~,~~ Gottfried Creek.

For your convenience, we are also enclosing brochures and other information that was made available at the workshop that should be helpful as you assess your property.

If you ~~would be~~are interested in attending another workshop, would like assistance with the sketch skeet, or need additional information, please don't hesitate to contact me at (941) 650-1640 or kmeaux@scgov.net.

Sincerely,

Kathryn L. Meaux, ESIII
Sarasota County Water Resources

Enclosures

Appendix D

Pet Waste Campaign

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Did you know the Florida Department of Environmental Protection has determined **GOTTFRIED CREEK** to be impaired for fecal coliform bacteria?

What are fecal coliform bacteria?

Indicator bacteria that live in the digestive system of humans and other warm-blooded animals.

Where do they come from?

They come from a variety of sources such as leaks in sewer lines, failing septic systems, stormwater runoff, human sewage, birds, wildlife, pet waste, and farm animals.

What can we do?

Learn how to be a responsible pet owner to protect **Gottfried Creek** from fecal pollution.

LINKS

INFORMATION:

www.dep.state.fl.us/water/tmdl

http://watersheded.com/topics/pet-waste

COMPOSTING PET WASTE:

http://cityfarmer.org/petwaste.html

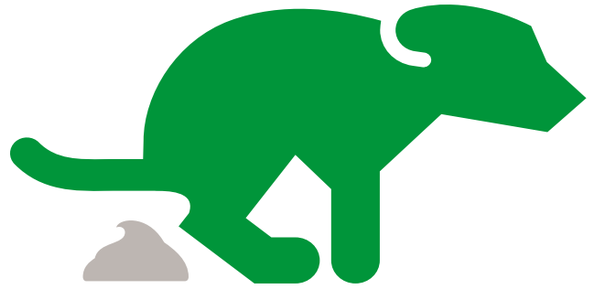
http://www.greenyour.com/lifestyle/pets/cat/tips/compost-your-pets-waste

http://www.plantea.com/dog-waste-compost.htm

Sarasota County

Sarasota County Environmental Services
1001 Sarasota Center Blvd.
Sarasota, FL 34240
941-861-5000

Protect GOTTFRIED CREEK by Picking Up After Your Pet!



PET WASTE POLLUTES!

BE A RESPONSIBLE PET OWNER

WHAT YOU **SHOULD DO.**

Throw it in the garbage.
Seal the pet waste in a plastic bag and dispose of it in your trash can.

Bury it in your yard.
Dig a trench or hole about 5 inches deep and away from any vegetable gardens, wells, or bodies of water.

Compost it.
There are many in-ground and above-ground compost bin designs and methods available. **DO NOT** put the pet waste composting area near your household compost, wells, storm drains, ponds, lakes, ditches, or other bodies of water.

Hire a pet waste removal service.
Just make sure the waste is picked up regularly and that the service is disposing of it properly.

WHAT YOU **SHOULDN'T DO.**

NEVER leave pet waste on the ground, on the sidewalk, or in the street.
Proper disposal prevents harmful bacteria from polluting waterways and endangering public health.

NEVER throw pet waste into a storm drain, ditch, pond, lake, or any other body of water.

NEVER flush pet waste down the toilet.
Even though the pet waste would go to a sewage treatment plant, flushing it wastes water, especially during a drought.

When composting pet waste, NEVER add it to your household compost pile.
The temperature will not be hot enough to kill the bacteria and parasites in the pet waste. Compost it separately.

IMPORTANT FACTS:

Storm drains in Sarasota County are not connected to a wastewater treatment plant.

Pet waste left on sidewalks, streets, yards or open spaces can be washed away and carried by rainwater into storm drains and drainage ditches, which flow to nearby lakes, streams, rivers and bays.

A single gram (about 1/4 teaspoon) of pet waste contains an average of 23 million fecal coliform bacteria, some of which can cause illnesses or diseases in humans.

In addition to human health risks, bacteria and parasites in pet waste can cause serious water quality problems, resulting in polluted drinking water, "No Swim" beach advisories, shellfish bed closures, and surface water impairments.

GOTTFRIED CREEK WALK THE WATERBODY
PET WASTE CAMPAIGN
BROCHURE DISTRIBUTION LOCATIONS

Animal Shelters

1. Ears Animal Rescue Sanctuary
   145 W. Dearborn St.
   Englewood, FL 34223
   941-475-0630

Libraries

1. Elsie Quirk Library
   100 W. Dearborn St.
   Englewood, FL 34223
   941-474-3515

Humane Societies

1. Humane Society Suncoast
   6781 San Casa Dr.
   Englewood, FL 34224
   941-474-7884
2. Suncoast Humane Society
   290 S. Indiana Ave.
   Englewood, FL 34223
   941-361-1038

Parks

1. Englewood Sports Complex
   1300 S. River Road
   Englewood, FL 34223
   941-474-5845
2. Englewood Recreation Center
   101 N. Orange St.
   Englewood, FL 34223
3. Lemon Bay Park
   570 Bay Park Blvd.
   Englewood, FL 34223

Pet Stores

1. Mike's Aquarium & Pet Shop
   447 S. Indiana Ave.
   Englewood, FL 34223
   941-473-1041

2. Pet Supermarket
   1951 S. McCall Rd., Ste 100
   Englewood, FL 34223
   941-475-1500
3. Pac
   395 W. Dearborn St.
   Englewood, FL 34223
   941-474-7444

Veterinarians

1. Loving Care Animal Hospital
   2011 Englewood Rd., Englewood, FL 34223
   941-474-7771
2. Englewood Animal Hospital
   340 N. Indiana Ave.
   Englewood, FL 34223
   941-474-1295

Appendix E

Thomas Ranch

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Herald Tribune

Developers plan 11,000 homes for North Port

By [redacted]
Published: Friday, May 30, 2014 at 11:24 a.m.

HERALD-TRIBUNE ARCHIVE / 2007
The entrance to Thomas Ranch on U.S. 41 between Venice and North Port.

Canada's largest home builder plans to team up with a Sarasota developer and land buyer to construct more than 11,000 homes in South County.

Mattamy Homes plans for Thomas Ranch, a 9,650-acre tract in and around North Port, come after the company paid $86.25 million to acquire the ranch.

Development is expected to begin in 2016 and span 20 to 25 years, with 700 to 2,000 homes built at a time.

The property has already been approved for more than 11,000 homes and 3 million square feet of commercial space.

Vanguard Land Co., a Sarasota real estate acquisition and development firm headed by former Taylor Woodrow N.A. CEO John R. Peshkin, will be a minority partner and provide planning and direction.

"It's very rare to find a property of this size with the comprehensive plan approvals," Peshkin said Friday. "It's a great location and a great market, one of if not the best tracts of land on the west coast of Florida."

Thomas Ranch also marks the largest real estate purchase for Mattamy in its 10 years of operating in the United States.

"What was compelling about the deal was that the property has development time lines that are almost generational in length," said Peter Gilgan, Mattamy's founder and CEO.

"And we're also extremely excited about the growth potential of this part of Florida — we believe that the baby boomer demographic will continue to look to Florida as a place they want to retire, and this parcel of land will serve that need exceptionally well."

Herald-Tribune

Printed on page BM3

Thomas Ranch expansion rejected

By Doug Sword
Published: Wednesday, May 14, 2008 at 6:52 a.m.

A vast development in South Sarasota County was voted down Tuesday after county commissioners said they feared the raw size of the project and the impact it would have on area roads.

The 3-2 tally against the southern expansion of Thomas Ranch, known as the Gottfried Stewardship District, came despite about $200 million worth of road building commitments from the developer.

Tuesday's defeat may represent the last major effort by a developer to build big in the county's rural areas. A measure that passed in November requires a supermajority vote of 4-1 for commissioners to approve similar projects. A measure passed last week boosted the requirement to 5-0.

The Thomas Ranch expansion, though, which called for 5,700 homes and 300,000 square feet of commercial space on 2,850 acres, was already in the pipeline and needed just four commissioners to support it.

In the end, despite the long list of commitments, only two commissioners were for it.

"I'm thrilled, of course," said Ann Kaplan, president of the Sarasota Council of Neighborhood Associations, or CONA, which opposed the project.

Voter approval of three anti-development ballot questions over the last 14 months, particularly last week's 79 percent vote, influenced the commissioners' votes, Kaplan said.

Commissioners Jon Thaxton, Nora Patterson and Shannon Staub voted down the project. Paul Mercier and Joe Barbetta favored the development, mainly because of commitments by the developer to spend more than $180 million on a South County road network that would have added four major roads between Englewood, North Port and Venice. The developer also would have contributed toward the $90 million widening of North River Road.

Thomas Ranch's newest project is called the Gottfried Stewardship District because it drains into Gottfried Creek. But it is really the southern section of the 10,000-acre Thomas Ranch, most of which is in North Port and already slated for development.

In all, the North Port portion includes 7,500 acres, 15,000 homes and more than 3 million square feet of commercial, retail and office space, or more than three Westfield Sarasota Square malls.

The added commercial and retail space of the expansion so close to Englewood "would no doubt compete" with Dearborn Street and the county's efforts to bring commerce to the village's center, Staub said.

As for what happens next, that is uncertain from the developer's standpoint, said Thomas Ranch attorney Jeffrey Boone.

"Clearly what's next is there's no way to get River Road built," Boone said, referring to the developer's offer to front the $90 million to widen North River Road.

Then there is the other $180 million Thomas Ranch offered to spend extending Gissenger Street and Manasota Beach and Keyway roads eastward across the development and constructing a new north-south road, West Villages Parkway.

"These roads will be built, it's just taxpayers will have to pay for it," Boone said.

Current zoning allows Fourth Quarter Properties, also known as Thomas Ranch, to build 441 estate homes on the 2,850-acre Gottfried expanse, with an option to seek a rezoning to boost that to 1,072.

The commission's vote also invalidates another promise from the developer, which was to limit development on an adjacent property it owns to 1,300 homes.

If Fourth Quarter Properties wins rezoning for that property and its Gottfried land, it could build more than 4,300 homes there. Rezonings require a 3-2 vote from county commissioners.

While Staub and Patterson did not voice strong opposition to the project until just before Tuesday's vote, Thaxton has criticized the project for months as unjustifiable because of its impact on roads, water supplies and other infrastructure.

This story appeared in print on page BM3

Herald-Tribune

Printed on page A1

City OKs Taylor Ranch plan

After reviewing a developer's proposal three times, North Port approves designating the property as an improvement district.

By PATRICK WHITTLE
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NORTH PORT -- The third time was the charm for developer Stan Thomas.

The Georgia-based developer's bid to designate a 7,800-acre former Taylor Ranch property as a Special Improvement District, with its own taxation powers and governing body, won unanimous approval from the City Commission on Wednesday after failing in February and November of 2003.

The city's passage of the plan, which still must be approved by the state Legislature, opens the door for Thomas to sell bonds to finance roads and infrastructure for as many as 15,000 homes on his land over the next 15 years.

Thomas' representatives said they intended to bring the plan before the state in March, and break ground in mid-2005.

The plan essentially shifts the cost of providing infrastructure from the developer to the future residents of what would be called West Villages Improvement District.

The residents would repay infrastructure bonds through property assessments.

For example, Thomas is required by law to pay for roads and sewers to serve the area. But with a Special Improvement District he could float tax-free bonds to raise the money, and the residents would pay it back.

Thomas gained the commission's approval by clarifying how the taxation will affect future residents and by modifying his original proposal to give the city more control over the district.

During both previous votes, which resulted in the city's rejecting the proposal by a 3-2 margin, the commissioners voiced concerns over whether residents could be hit with unexpectedly costly assessments. They also worried that the district would have too much authority.

Thomas allayed the commissioners' concerns by adding two major changes to the proposal since the November vote.

Without a majority vote of residents, the district could make no improvements that would result in higher assessments.

Thomas also included a disclosure clause in the proposal, guaranteeing that people who buy into his development will be told that in addition to city and county taxes, they'll also pay special assessments to repay the bonds.

The other change specifies that the City Commission must approve any changes made to the district.

"I think it never was our intention to usurp the authority of the city," said Thomas representative Bruce Williams. "I think the changing of the document did more to clarify it."

Thomas attorney Jeff Boone assured the commissioners that the city would have maximum control of the district.

"Basically folks . as we locals say, ain't nothing we can do without ya'll saying we can do it first," he said.

Commissioner Barbara Gross, who voted against the plan twice, said she was satisfied with the changes.

"I was always the most vocal opponent of this all the way," she said. "I think we've done the best we can to protect the people who will live there 10, 15 years from now."

The Thomas land, mostly south of U.S. 41 and west of River Road, was purchased as part of a 26-square-mile parcel he purchased for $78 million in 2001 and 2002.

According to Boone, zoning changes could allow as many as 15,000 homes over the next 15 years on the land, which is now zoned for a maximum of 1,600 residences.

Boone said the district would probably be a mix of residential, commercial, and office space. He said a combination of Thomas and others would probably develop the property.

This story appeared in print on page A1