Okeechobee Breach Disaster Report

When, Why, and What to Do

Multi-media: in ordinary language
Release date: June 20, 2007

CD ROM Includes: *over 4,000 pages of maps, reports, aerial images and documents, plus videos, and a modifiable Excel database*

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"The Herbert Hoover Dike poses a grave and imminent danger to the people and the environment of south Florida." United States Army Corps of Engineers Consulting Engineer's Report from *National Geographic News*, 9/2006

"... a failure could be devastating, resulting in human suffering, loss of life, immense property damage (including residential and agricultural) and destruction of the natural habitat." Herbert Hoover Dike, Environmental Assessment, United States Army Corps of Engineers, 4/2007

A breach would cause flooding from Palm Beach County all the way to Miami, according to the Corps of Engineers. Florida Sun-Sentinel 5/2007

First Edition ... ***ISBN# 0-912451-64-5***
For Current Editions: www.vport.info

CONTENTS:

Sample Exhibits on CD ROM:
For Full List, See: index.htm on the CD ROM

Videos on the CD ROM:

Lake Okeechobee and the Herbert Hoover Dike, General information from the US Army Corps of Engineers

Asian Tsunami ... 2 minutes, Amateur video, source unknown, as shown on BBC News. Shows street flooding and moving debris field of the type expected with the Okeechobee Breach

Hurricane Katrina ... Nice overview from www.archive.org

Shock Troops for Disaster ... 1938 WPA accounts of the flooding, rescue/ recovery efforts and rebuilding ... Includes footage of what happens when a dike breaches.

The Mississippi Flood of 1927, 27 minutes, US Army, featuring Herbert Hoover, showing levee breaches, tent cities, field kitchens and mass inoculations. Hoover directed relief efforts for 500,000 refugees.

NASA Animation of accumulated rainfall from hurricanes Charley, Frances and Jeanne

Army Corps animation of historical vs. present flow of the Everglades

Major Publications - representative list: [see Index.htm on CD ROM for complete list]

Herbert Hoover Dike, Environmental Assessment, USCAE, 2007, PDF, 188 pages [pivotal document for the report]

Emergency Evacuation Plan, Palm Beach County, 2006, PDF, 97 pages

High Resolution topographic map of Lake Okeechobee, USGS, 1 page

High Resolution Geological Map of Florida, 1 page

- Legend for Hi-res Geological Map, 1 page

High-Resolution Image of the Florida Coast, 4 meg. ... Photo-mosaic from micgraphic.com [requires banner printing]


Impact of Anthropogenic Development on Coastal Ground-Water Hydrology in Southeastern Florida, 1900-2000, USGS/USDOI, 2005, 87 pages

Florida Everglades Subsidence, USGS and SFWMD, undated, 12 pages,

The Deadliest, Costliest, and Most Intense United States Tropical Cyclones from 1851 to 2004 (And Other Frequently Requested Hurricane Facts). NOAA Technical Memorandum NWS TPC-4, Tropical Prediction Center, Miami, FL.

Total System Conceptual Ecological Model, SFWMD, 2005, PDF, 25 pages

C*omprehensive Everglades Restoration Plan,* USCAE, 2005, PD, 57 pages

Water Preserve Area Feasibility Study – 2010 Recommended Plan, SFWMD, PDF, 25 pages

USCAE HHD Fact Flyer, 2006, PDF, 2 Pages

Florida Transport, Trends and Conditions, FL DOT, 2005, PDF, 40 pages

L*ake Okeechobee Seepage Report*, US Dept. of the Interior, 1972, PDF, 70 pages

Lessons for the Gulf Coast from Flooding in Other Places in the Last Sixty Years. RAND corporation: 2006, PDF, 68 pages

Sinkholes in Florida, 27 pages ... excellent information in ordinary language.

Manuals [Complete] ... partial list

US Army Combatives Manual, includes group tactics and situational awareness [247 pages]
US Army, FIrst Aid [227 pages]
US Army Field Kitchen and Sanitation Manuals [700 pages]
US Army Latrine Manual [80 pages]
US Army Food Garnishment [10 pages]

White Paper Related Websites:

ABOUT THIS DOCUMENT: http://www.vport.info

USACE: United States Army Corps of Engineers, Main website: http://www.saj.usace.army.mil/

USACE: Okeechobee Current Lake Levels and Flows: http://www.saj.usace.army.mil/h2o/reports/r-oke.html

INTRODUCTION

Eighteen million Floridians are at seasonal risk from hurricanes. The low lying, southern portion of the state is at the highest risk. Historically, these risks have been generally-understood. Most of Florida is low-lying wetlands, but ... the population is willing to take the risks from storms, in return for the lifestyle and economic benefits. This Document addresses a risk which is *not* well-understood, *viz.* the imminent filling of Lake Okeechobee and the breach of the surrounding dike. The US Army Corps of Engineers [USACE] predicts that such a breach could occur as a result of *only* a wet tropical storm.

Six million South Floridians are in near term jeopardy from a breach, with the potential to kill many more people than Hurricane Katrina, the Okeechobee Flood of 1928 and the Johnstown Flood *combined*! The losses may be one trillion dollars. We would love to be refuted and provide detailed and extensive documentation to help you evaluate our hypotheses.

Unfortunately, while government sources acknowledge the risk, their explanations are, at best, cursory. This document explains the risks in depth and provides supporting documentation.

" Lake Okeechobee is the "liquid heart" of South Florida, located in south-central Florida. The massive lake is a 730 square mile, relatively shallow lake with an average depth of 9 feet (2.7 meters), and is the second-largest freshwater lake in the continental United States, second only to Lake Michigan. Lake Okeechobee's drainage basin covers more than 4,600 square miles (11,913 km2)." [source: South Florida Water Management District, emphasis ours]

Beginning in 1915, The Everglades' physical characteristics have been modified for 90 years by commercial and government interests.

The project is currently known as the "Herbert Hoover Dike" [HHD]. The primary, historical forces at play have been economic ... i.e. agricultural, mining/export and property development. With short-term goals and little foresight, massive dikes were built from muck, shell and sand with public money. An extensive canal and pumping system was built which ultimately *reversed* the flow of the entire Everglades Watershed. For over a decade, the flow has been generally north, and this flow is managed by an extensive *ad hoc* system of dikes, wells, canals and pumps.

The government's *public* justification for the HHD since 1928 has been protecting citizens from flooding. The *primary function* of the dike and control system, however, has been to provide a water reservoir and distribution system for agricultural and real estate development interests ... creating a valuable but fragile system for political distribution of economic benefits to campaign contributors. The United States Army Corps of Engineers has been leveraged into implementing the system by political pressure.

At first, the HHD appeared to be a win-win situation. Ag interests like sugar, citrus, turf farms and vegetables obtained water on demand and ... developers got "dry" lots. The Panama Canal was completed in 1914, a year before the HHD work started ... *How hard could it be to drain a mere swamp?* Environmentalists have complained since the inception of the HHD, but their numbers were few. Times, however, have changed. While we are in sympathy with environmentalists, this document is based on a desire to help save lives and grounded

in pure geophysics and economics. "Insiders" and those who cared to do the research, have known for decades that the Okeechobee dike system has been at serious risk of breaching, but ... the data hasn't been made generally available. A current Army Corps of Engineers document, April, 2007, 188 pages... [on the CD ROM] briefly describes the problems at Lake Okeechobee, and proposes and ranks solutions. It contains sketchy, preliminary engineering suggestions. *The document is entitled:* ***HERBERT HOOVER DIKE MAJOR REHABILITATION MARTIN AND PALM BEACH COUNTIES***

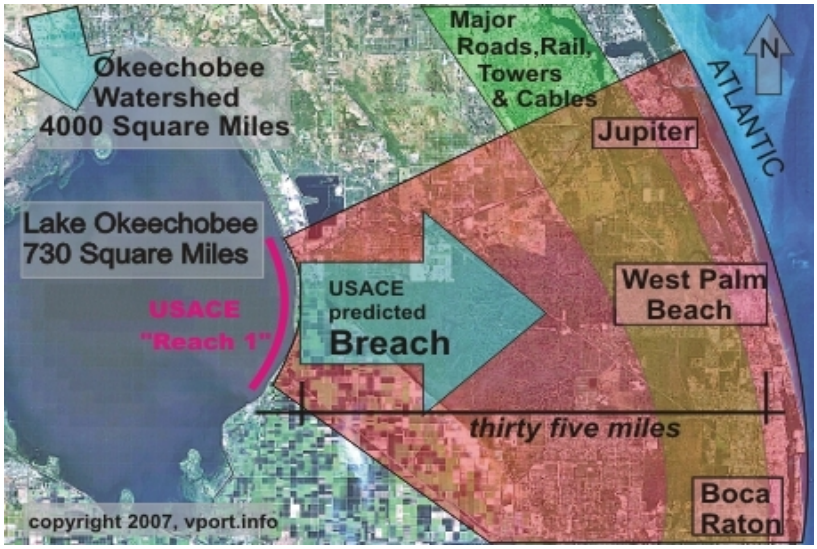
Storm Category	Lake Level					
Threat/Risk Low Moderate High	12′	12′ – 15′	15′ – 18′	18′ – 20′	20′ – 22′	> 22′
T.S.	L	L	L	M	H	H
1	L	L	L	M	H	H
2	L	L	M	M	H	H
3	L	M	M	H	H	H
4	L	M	M	H	H	H
5	L	M	H	H	H	H

Image: Official risk chart from the USACE document, as a function of an incidence of a single storm and a function of Okeechobee Lake levels.

SOURCE: http://www.saj.usace.army.mil/cco/HHD/Reports/SupplementalReach1EA.pdf

To understand the "big picture" requires reading this complete document, but in thumbnail, the USCAE predicts that:

- Okeechobee will most likely breach in the direction of West Palm Beach.
- There is not time or money to effect repairs within a decade.



In this Report, we advance and support the contentions that:

-A breach is highly probable.
- Road and rail traffic to South Florida, and six million people, will be severed entirely.
- The flood [until Okeechobee reaches equilibrium] may be longer than 3 months.
- The numbers of deaths, the logistical problems, and the costs, may exceed *Katrina* by a factor of ten.

We have tried to limit value judgments and be objective, using only official sources of data. It is hard to be clinical however, given that the Corps tells us that the dike will almost certainly breach and that they are unable to effect viable solutions. The Corps does not have funding or top-down direction from the US Congress. There are no current plans ... just preliminary concepts mired in frequent litigation. The Corps projects they will be able to make "repairs" by the year 2017 ... if:

- required subsurface data is collected
- a viable engineering plan can be developed based on that data
- approvals from all jurisdictions and regulatory agencies can be obtained
- an as yet undetermined [but escalating] amount money is allocated for the repairs [currently $1B, USD]
- and, if the work can be completed on time and on budget [with no unexpected events]

Our conclusions are based on substantial research and the Corps' information, plus other official sources. We conclude that there is a virtual certainty that the HHD will fail. We extrapolate from the Corp's data and show

likely scenarios for the physical and economic results of the failure. We propose solutions and strongly urge South Floridians to put immediate pressure on their politicians to: Stop doing "Studies" and "Workshops" and ... allocate immediate funding to the Corps to: A. fix the dike, and B. make it safe until it's fixed with a spillway.

We urge South Floridians to pay special attention to the conditions under which the dike can breach. There is a significant possibility that the dike will breach on a sunny day, days or *weeks* after a storm has passed and that evacuation notices could be *well* under 24 hours or absent entirely.

Relevant agencies and the public have been lulled into a false sense of security by three major factors:

1. Lake levels are currently [7/07] very low due to a drought. Significant leakage is stopped, wells are inadequate to serve South Florida and currently a "filled" Lake Okeechobee is desirable. For the present, the breach is far less newsworthy than brown lawns. Both public and commercial stakeholder sentiment is currently to fill the lake! The Corps will be politically pressured [*directed*] to do what they have repeatedly said is unsafe.

2. Florida has been lucky and not recently experienced hurricanes with large tidal surges and large quantities of rain. The record hurricane season of 2004 when 4 major storms hit Florida caused the lake to reach a near record high and damaged the dike .... *However* ,,, Florida is a large state. Of those 4 major storms, only *one [Jeanne]* put any significant water into the Lake and watershed, and it was *barely* significant at that. We prove that in Chapter One with excellent NASA data. MAJOR POINT: One single wet storm at less than hurricane strength can put more water into Okeechobee than the entire 2004 hurricane season.

3. Disinformation: Economic influences tend to minimize the dangers as presented in government reports and releases to the news. News media is market and advertiser driven and sensitive to the fact that bad news is inversely proportional to advertising revenues when it affects stakeholders negatively. News is frequently slanted and the Okeechobee Breach is such a case. We do, however, give high marks to sme media entities like the Palm Beach Post and the Florida Sun-Sentinel for excellent coverage ... as far as it goes. Unfortunately, corrupt Floridian politicians [convicted of taking individual bribes of up to $8M USD] have controlled information releases. Whether very recent convictions will change the status quo is open to question, however, we contend that in the best of all possible scenarios, there is not time to correct the problems before a disaster. Floridian Developer/Realtors, are obligated by law to: Deal honestly and fairly; Use skill, care, and diligence in transactions; Disclose all known facts that materially affect the value of residential real property that are not readily observable to the buyer; We discuss these statutory obligations in Chapter 3. Real estate professionals, however, are *not disclosing* the public information contained in Chapters 1 and 2. Growth continues at a feverish pace in the flood zone, despite allegedly "slow" sales. In May 2007, the US Post Office added three new ZIP Codes to western Palm Beach County ... directly in the flood path of a breach.

We have tried to avoid "ethical" arguments in this Report and stick to facts ... The Dike holds back cubic miles of water. It will fail and the flow of life-essential goods and services to six million people will be terminated for months. This is not a Katrina-type scenario ... this is the *Breach of Lake Okeechobee* which is unprecedented.

This will not be a "spectacular" cyclone inundating Bangladesh or a pyroclastic flow from a Vesuvius eruption. Millions of people living an unsustainable lives will be entirely isolated with no logistical solution. One good analogy is Darfur, where millions are slowly starving. The difference is that there need be no invasion, no shots fired, no identifiable villain like Saddam, no major weather event, no mushroom cloud. It will be a large, dirty, toxic, strangling amoeba that could arrive on a sunny day making Katrina look like a practice run. The "ripples" from the Breach will be economic tidal waves that affect the world.

We won't apologize for dramatization ... This certain disaster will be of biblical proportions. As water can burst through a dike, good information can burst through disinformation. We hope this document is a start. Herein, we present the facts and our conclusions ... We strongly urge you to make your own evaluation ... The stakes are very high.