Dam Engineering

Designing New Dams & Modernizing Existing Dams for Risk Reduction

The **Florence & Hutcheson** Dam Engineering staff has been involved with more than 100 dams, including more than 50 categorized as high hazard. Our specialized staff has a wide range of experience, from simple siphon spillways to complex labyrinth and chute spillways.

Our firm's Dam & Levee Engineering Group Director, Jeff Powers, PE, has more than 24 years of experience in the Water Resources arena with a focus on Dam Design and Renovation. A certified 'Engineer of Record' with the *Georgia Safe Dams Program*, Mr. Powers serves as our senior consultant on high hazard dams.

In addition, **Florence & Hutcheson** has been performing subsurface investigations and geotechnical engineering services for more than 40 years. Our experience includes the analysis of earth dams, foundation investigations, seepage analysis, and geotechnical engineering.

Florence & Hutcheson runs full-time drill crews experienced in soil sampling, testing, and rock coring. Our USACE-certified Geotechnical and Materials Testing Laboratory provides a full complement of testing equipment and experienced technicians who routinely perform testing and analysis in accordance with current AASHTO and ASTM procedures.

Our combination of engineering and geotechnical expertise allows **Florence & Hutcheson** to act as your sole source for Dam Design and Rehabilitation projects. Let us introduce you to our professionals and learn more about the dam improvements you are considering.

Services include:

- Dam Design/Rehabilitation
- Visual Inspections
- Dam Evaluation Reports
- Hydrologic Analysis
- Spillway Design
- Structural Design
- Geotechnical Exploration
- Geotechnical Engineering
- Embankment Design
- Seepage Drain Design
- Dam Breach Analysis
- Expert Witnessing
- Emergency Action Plans
- Inundation Mapping
- Reservoir Surveys
- Bathymetric Surveys
- Hydrographic Surveys
- Dam Hazard Evaluations
- Environmental Permitting
- Value Engineering
- Construction Administration/Monitoring
- Levee Engineering

Levee Engineering

F&H In-House Levee Specialists Help Owners Respond to the Nation's Call for Levee Evaluation & Restoration

The National Committee on Levee Safety has determined that up to 100,000 miles of our nation's levees, many of them at least a half century old and of uncertain structural soundness and capacity, are approaching design life expectancy and are in need of rehabilitation.

Florence & Hutcheson has stepped up to the plate to assist levee owners in the evaluation and restoration of the patchwork of berms, dikes and levees around the country. Let us introduce you to our Levee Specialists who can provide more information on the most current Federal Emergency Management Agency (FEMA) and US Corps of Engineers (USACE) requirements.

Our firm's Dam & Levee Engineering Group Director has more than 24 years of experience in the Levee Engineering arena. He serves as certified 'Engineer of Record' with the *Georgia Safe Dams Program* and is a senior consultant on high hazard dams.

In addition to our technical knowledge, **Florence & Hutcheson** understands the levee owner side of the equation. One of our senior Levee Engineers served as the City of Paducah's Flood Control Manager overseeing the city's 12 miles of earthen levees and concrete floodwalls. Responsible for the rehabilitation of the system's pumps, gates, and pipe penetrations, we are intimately knowledgeable of the day-to-day operation associated with a modern levee system.

From our work with private owners, municipalities, and Levee Boards to USACE Federal Districts, **Florence & Hutcheson** has the operational experience, technical expertise, and resources to address every levee related project.

Services include:

- Design
- Operations
- Inspection
- Certification
- Geotechnical Evaluation
- Structural Evaluation
- Floodwalls
- Earthen Levees
- Closures
- Flood Gates
- Vegetation Inspections
- Surveys
- Levee Realignment Studies
- Hydraulic Modeling
- Pipe Rehabilitation
- FEMA Coordination
- Scour Analysis
- Slope Stability Analysis
- Seepage Analysis
- Right-of-Way & Owner Issues