3.01.00. - AIRPORT OVERLAY ZONE

Footnotes:
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Cross reference— *Aviation, ch. 14.*

3.01.01. - Generally.

This section is adopted pursuant to the authority conferred by F.S. § 333.03. It is hereby found that an airport obstruction has the potential for being hazardous to aircraft operations as well as to the persons and property on the ground in the vicinity of the obstruction. An obstruction may affect land use in the vicinity of the obstruction, and in effect reduces the size of areas available for the landing, taking off and maneuvering of aircraft, thus tending to destroy or impair the utility of the Okeechobee County Municipal Airport and the public investment therein. Accordingly, it is declared:

A. That the creation or establishment of an airport obstruction is a public nuisance and an injury to the region served by the Okeechobee County Municipal Airport;

B. That it is necessary in the interest of the public health, public safety, and general welfare that the creation of airport obstructions and structures be prevented; and

C. That it is necessary in the interest of the public health, and general welfare that the establishment of incompatible land uses be prevented in the areas defined as the CNR 100 contour (ASDS 85 dBA) noise area and/or the accident potential hazard area; and

D. That the prevention of these obstructions, structures and incompatible land uses should be accomplished to the extent legally possible, by the exercise of the police power without compensation; and

E. That both the prevention and the creation or establishment of airport obstructions, structures and incompatible land uses and the elimination, removal, alteration, mitigation, or making and lighting of existing airport hazards are public purposes for which the political subdivision may raise and expend public funds and acquire land or interests in land.

3.01.02. - Establishment of airport zoning map.

There is hereby established an official Okeechobee County Municipal Airport zoning map. This map shall be maintained and modified by the county clerk in the manner prescribed for the official zoning atlas in section 2.03.01 of this code.

3.01.03. - Airport zones and airspace height limitations.

In order to carry out the provisions of this section, there are hereby created and established certain zones which includes all of the land lying beneath the approach, transitional, horizontal and conical surfaces as they apply to the Okeechobee County Municipal Airport. Such zones are shown on the official Okeechobee County Municipal Airport zoning map. An area located in more than one of the described zones is considered to be only in the zone with the more restrictive height limitation. The various zones are hereby established and defined as follows:

A. *Primary zone.* An area longitudinally centered on a runway, extending 200 feet beyond each end of that runway with the width so specified for each runway for the most precise approach existing or planned for either end of the runway. No structure or obstruction will be permitted within the primary zone, that is not part of the landing and takeoff area, and is of a greater height than the nearest point on the runway centerline.

   1. The width of the primary zone is as follows: Runways 13, 31, 04 and 22; 500 feet for visual runways having only visual approaches.
   2. The width of the primary zone of a runway will be that width prescribed in this section for the most precise approach existing or planned for either end of that runway.
   3. No structure or obstruction will be permitted within the primary zone, that is not part of the landing and takeoff facilities and is of a greater height than the nearest point on the runway centerline.

B. *Horizontal zone.* The area around each civil airport with an outer boundary the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary zone of each airport's runway and connecting the adjacent arcs by lines tangent to those arcs.

   1. The radius of each arc is: Runways 13, 31, 04 and 22; 5,000 feet for all runways designated as visual.
   2. No structure or obstruction will be permitted in the horizontal zone that has a height greater than 150 feet above the airport height.

C. *Conical zone*. The area extending outward from the periphery of the horizontal zone for a distance of 4,000 feet. Height limitations for structures in the conical zone are 150 feet above airport height at the inner boundary with permitted height increasing one foot vertically for every 20 feet of horizontal distance measured outward from the inner boundary to a height of 350 feet above airport height at the outer boundary.

D. *Approach zone.* An area longitudinally centered on the extended runway centerline and extending outward from each end of the primary surface. An approach zone is designated for each runway based upon the type of approach available or planned for that runway end.

   1.

The inner edge of the approach zone is the same as the primary zone and it expands uniformly to a width of: Runways 13, 31, 04 and 22; 1,500 feet for that end of a runway with only visual approaches.

2. The approach surface extends for a horizontal distance of: Runways 13, 31, 04 and 22; 5,000 feet for all visual runways.
3. The outer width of an approach zone to an end of a runway will be that width prescribed in this subsection for the most precise approach existing or planned for that runway end.
4. Permitted height limitation within the approach zones is the same as the runway end height at the inner edge and increases with horizontal distance outward from the inner edge as follows: Runways 13, 31, 04 and 22; permitted height increases one foot vertically for every 20 feet horizontal distance for all utility and visual runways.

E. *Transitional zone.* The area extending outward from the sides of the primary zones and approach zones connecting them to the horizontal zone. Height limits within the transitional zone are the same as the primary zone or approach zone at the boundary line where it adjoins and increases at a rate of one foot vertically for every seven feet horizontally, with the horizontal distance measured at right angles to the runway centerline and extended centerline, until the height matches the height of the horizontal zone or conical zone or for a horizontal distance of 5,000 feet from the side of the part of the precision approach zone that extends beyond the conical zone.

F. *Other areas.* In addition to the height limitations imposed in paragraphs A through E above, no structure or obstruction will be permitted within Okeechobee County that would cause a hazard to air navigation.

3.01.04. - Airport land use restriction.

Notwithstanding any other provision of this code, no use may be made of land or water within any zones established by this code in such a manner as to interfere with the operation of an airborne aircraft. The following special requirements shall apply to each permitted use:

A. *Generally.*

1. All lights or illumination used in conjunction with street, parking, signs or use of land and structures shall be arranged and operated in such a manner that it is not misleading or dangerous to aircraft operating from a public airport or in vicinity thereof.
2. No operations of any type shall produce smoke, glare or other visual hazards within three statute miles of any usable runway of a public airport.
3. No operations from any type shall produce electronic interference with navigation signals or radio communication between the airport and aircraft.
4.

Use of land within the accident potential hazard area shall prohibit high-density residential use, schools, hospitals, storage of explosive material, assemblage of large groups of people or any other use that could produce a major catastrophe as a result of an aircraft crash.

B. *Lighting.* Notwithstanding the preceding provisions of this section, the owner of any structure over 200 feet above the ground level shall install lighting in accordance with Federal Aviation Administration advisory circular 70-7460-1D and amendments thereto on such structure. Additionally, high-intensity white obstruction lights shall be installed on a high structure which exceeds 749 feet above mean sea level. The high-intensity white obstruction lights must be in accordance with Federal Aviation Administration advisory circular 70-7460-1D and amendments.

C. *Hazard marking and lighting.* Any permit or variance granted shall require the owner to mark and light the structure in accordance with FAA advisory circular 70/7460-1D or subsequent revisions. The permit may be conditioned to permit Okeechobee County at its own expense to install, operate and maintain such markers and lights as may be necessary to indicate to pilots the presence of an airspace hazard if special conditions so warrant.

D. *Airport noise zones.* No person shall sell, lease or offer to sell or lease any land within the airport noise zone (100 CNR 85 dBA contour) unless the prospective buyer or lessee has been given the following notice in writing:

"Noise Warning—this land lies beneath the aircraft approach and departure routes for the Okeechobee County Municipal Airport and is subject to noise that may be objectionable."

3.01.05. - Miscellaneous aviation restrictions.

This section attempts to balance the interest of the county, where Okeechobee must provide for adequate solid waste disposal for the residents and visitors of Okeechobee County while at the same time provide a safe aviation environment for existing airports and landing strips located in the county.

A. *Piston-driven aircraft.* No piston-driven aircraft may utilize a landing or takeoff point or airport within 5,000 feet of an active or open permitted and licensed landfill in Okeechobee County.

B. *Turbine-driven aircraft.* No turbine-driven aircraft may utilize a landing or takeoff point or airport within 10,000 feet of an active or open permitted and licensed landfill in Okeechobee County.

C. *New aviation facilities.* No new aviation facilities, airports, landing or takeoff points shall be licensed or permitted within a five-mile radius of an active or open permitted and licensed landfill in Okeechobee County.

From: Deborah Manzo
To: Bill Royce
Cc: Richard Reade
Subject: Re: H&H Study Quick Guide by FEMA
Date: Monday, October 2, 2023 8:05:34 PM
Attachments: FEMA HH Study Quick Guide(Final).pdf

Thank you Bill.

Deborah S. Manzo, Okeechobee County Administrator
Sent from iPhone

On Oct 2, 2023, at 6:01 PM, Bill Royce <broyce@co.okeechobee.fl.us> wrote:

I found this Quick Guide from FEMA.
We do reference hydrologic and hydraulic data in in our land development regulations.
We adopted the model ordinance when new flood maps and flood regulations were adopted in 2015.
There is a watercourse on the property that was just rezoned.
I don't believe anything else we have reviewed since 2015 meets the requirements for an H&H study.
This EIP project of a couple thousand acres would require it, but their whole concept is altering a watercourse to filter water, so it would be an integral part of their plans anyway.

William Royce
Okeechobee County
Community Development Department
1700 NW 9th Avenue, Suite A
Okeechobee, FL 34972
Phone (863) 763-5548
Fax (863) 763-5276

DHS FEMA Region IV

HYDROLOGIC AND HYDRAULIC (H&H) STUDY QUICK GUIDE

DEFINITION

A Hydrologic and Hydraulic (H&H) Study is the study of movement of water, including the volume and rate of flow as it moves through a watershed, basin, channel, or man-made structure.

PURPOSE

H&H studies are completed to ensure structures are sized correctly to handle floodwaters, while not inadvertently increasing flooding up or down stream. The studies are performed to quantify the volume flow rate of water draining from a watershed (i.e., drainage area), and determine the depth and velocity of flow and forces from flowing water on a surface or at hydraulic structures. H&H studies are essential to mitigate against flood loss in the future.

AN H&H STUDY IS REQUIRED

For FEMA-funded projects involving:

- Projects occurring in watercourses[1] with year-round or seasonal base flows[2]
- New construction or alterations of bridges and culverts, including changes to the length, diameter, material, number of culverts, or modifications to inlets or outlets (e.g. head or wing walls, rounding, grouted rip rap)
- New construction or re-construction of levees riverward of existing alignment or higher than existing grades
- Channel modification or realignment
- Significant re-grading (raising or lowering levels of land), including adding fill material(s)

WHEN AN H&H STUDY IS NOT REQUIRED

- Project is a storm water drainage or conveyance structure, where water does not flow year-round or seasonally
- Return back to exact pre-disaster condition (length, diameter, material, number of culverts, exit and entrance conditions, and stream morphology has not changed, etc.)

> ! *An H&H study may be only one of several requirements to ensure FEMA reimbursement. Permits may be required under the Clean Water Act or other regulations. Additional requirements may exist if state or federally listed threatened or endangered species, critical habitat, or cultural resources are present in the project area. Always coordinate with your community floodplain manager prior to making modifications in a mapped floodplain.*

HOW TO OBTAIN AN H&H STUDY

For assistance, contact an agency or company that has licensed, professional civil, environmental, or hydrologic engineers

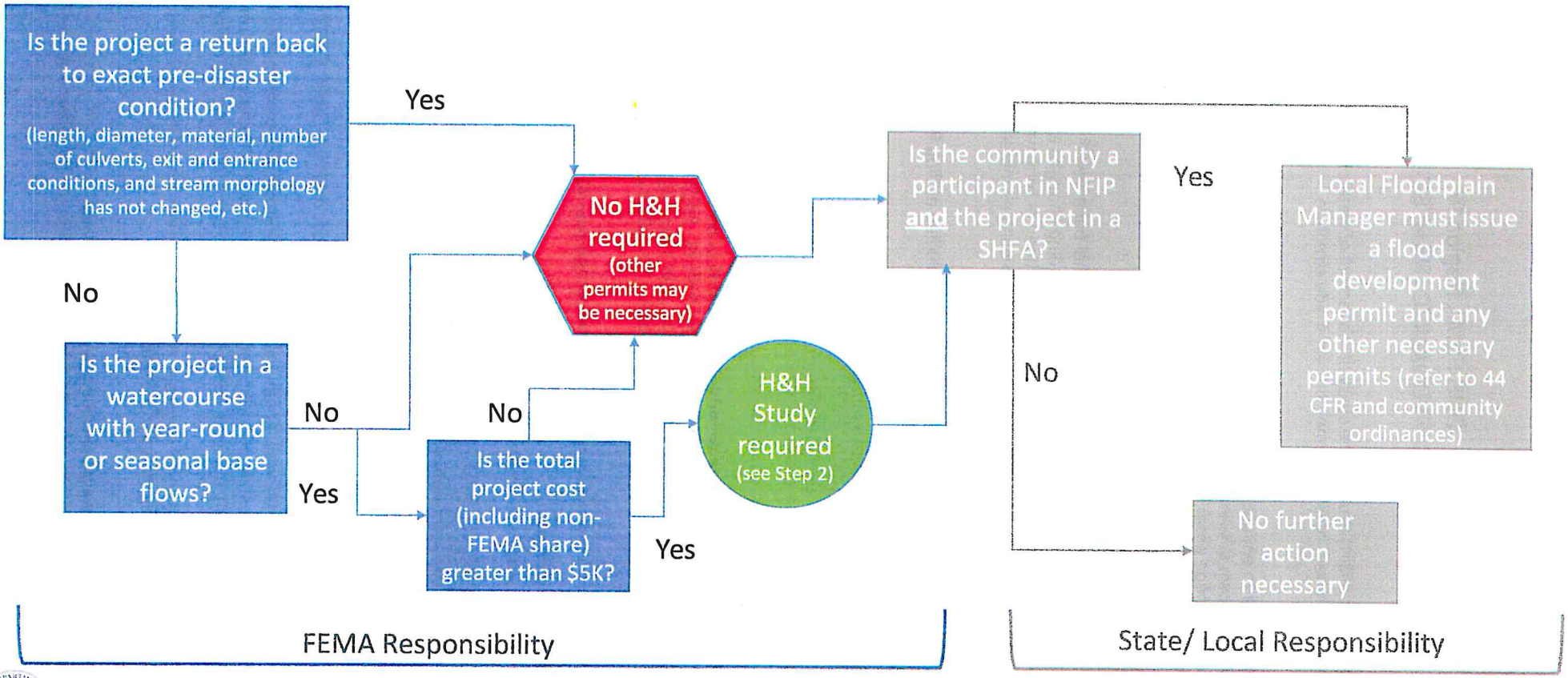
CONTENTS OF AN H&H STUDY (Minimum requirements)

All H&H studies shall include:

- Identification of upstream and downstream impacts (e.g. stage, velocity, duration) of alterations to the floodplain, including change to the extent or depth of the Special Flood Hazard Area (SFHA) or changes to the Base Flood Elevation (BFE)
- General site description, including location, latitude and longitude, drainage basin, FIRM, regulatory mapped flood zone (if applicable)
- Existing condition: pipe shape, material, length, inlet and outlet conditions, performance level
- Proposed condition: pipe shape, size, material, length, inlet and outlet conditions, performance level
- Will the proposed condition satisfy the local floodplain ordinance and local and state storm water management requirements?
  Stamped certification by a professional engineer in the state where the facility is located and certification that the calculations and drawings comply with 44 CFR 60.3

ercourse definition: a natural or artificial channel through which water flows
e flow definition: natural or human-induced sustained flow of a watercourse in the absence of direct runoff

When an H&H Study is Required



FEMA