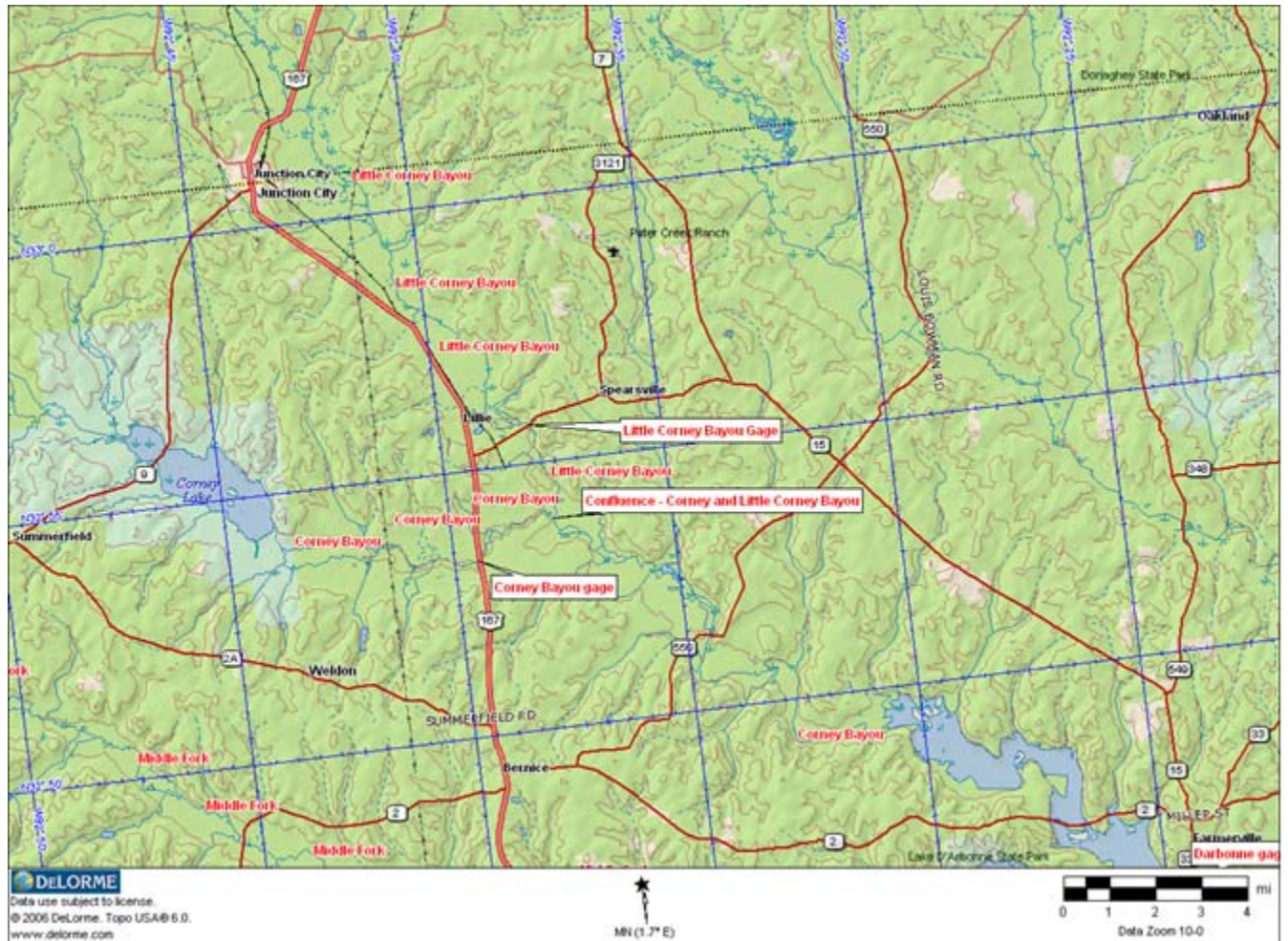


# Daily Flow Analysis - Little Corney Creek



**USGS 07366200 Little Corney Bayou near Lillie, LA**

**Union Parish, Louisiana**

**Hydrologic Unit Code 08040206**

**Latitude 32° 55' 45", Longitude 92°37' 58" NAD27**

**Drainage area 208.00 square miles**

**Period of Record - 1955 to 2006**

**Corney\_creek\_data :=**

	0	1	2	3
0	"USGS"	7.366·10 <sup>6</sup>	"1955-10-01"	4
1	"USGS"	7.366·10 <sup>6</sup>	"1955-10-02"	4
2	"USGS"	7.366·10 <sup>6</sup>	"1955-10-03"	4
3	"USGS"	7.366·10 <sup>6</sup>	"1955-10-04"	4
4	"USGS"	7.366·10 <sup>6</sup>	"1955-10-05"	4
5	"USGS"	7.366·10 <sup>6</sup>	"1955-10-06"	4
6	"USGS"	7.366·10 <sup>6</sup>	"1955-10-07"	4.7
7	"USGS"	7.366·10 <sup>6</sup>	"1955-10-08"	6.9
8	"USGS"	7.366·10 <sup>6</sup>	"1955-10-09"	7.2
9	"USGS"	7.366·10 <sup>6</sup>	"1955-10-10"	6.6
10	"USGS"	7.366·10 <sup>6</sup>	"1955-10-11"	5.6
11	"USGS"	7.366·10 <sup>6</sup>	"1955-10-12"	8.4
12	"USGS"	7.366·10 <sup>6</sup>	"1955-10-13"	20
13	"USGS"	7.366·10 <sup>6</sup>	"1955-10-14"	27
14	"USGS"	7.366·10 <sup>6</sup>	"1955-10-15"	18
15	"USGS"	7.366·10 <sup>6</sup>	"1955-10-16"	...

$i := 0..18822$

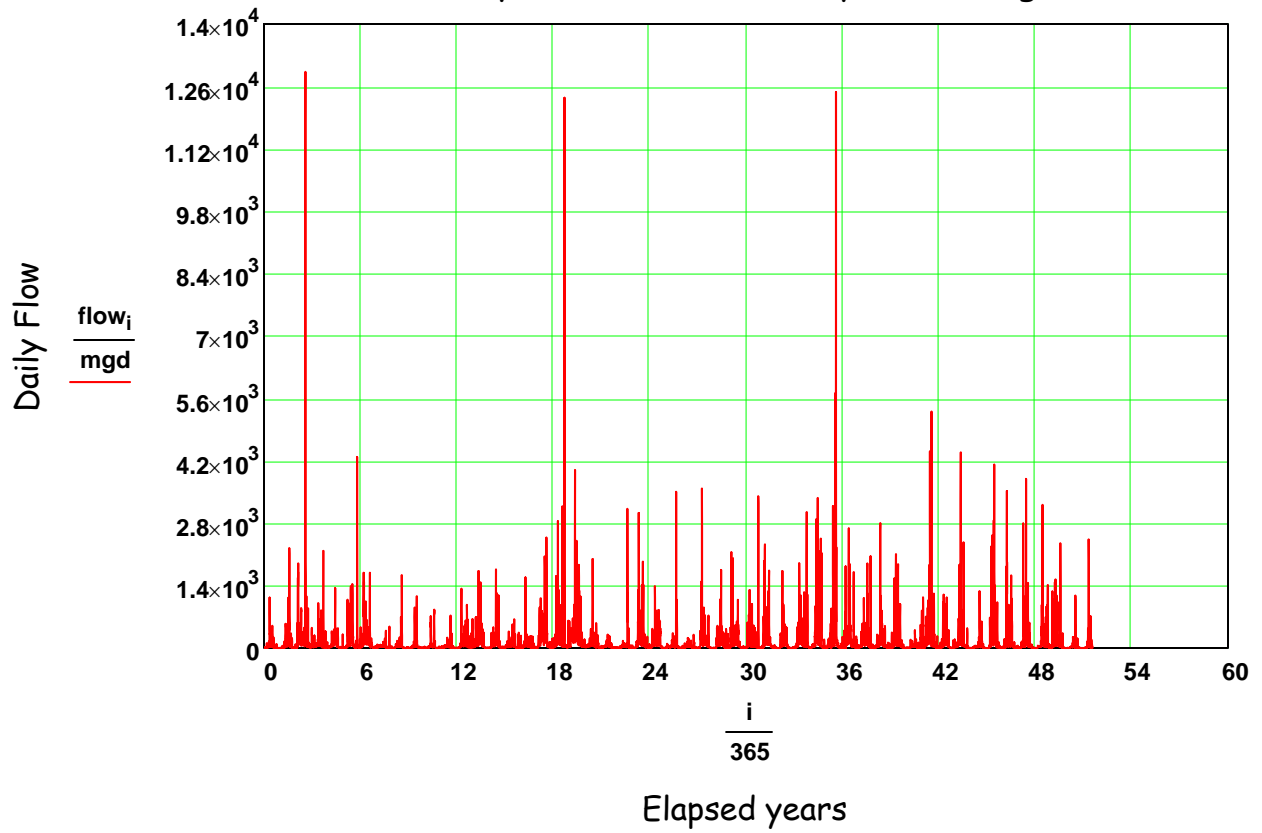
$flow_i := Corney\_creek\_data_i, 3 \cdot \frac{ft^3}{sec}$

$meanflow := mean(flow) = 211.865 \cdot \frac{ft^3}{sec}$

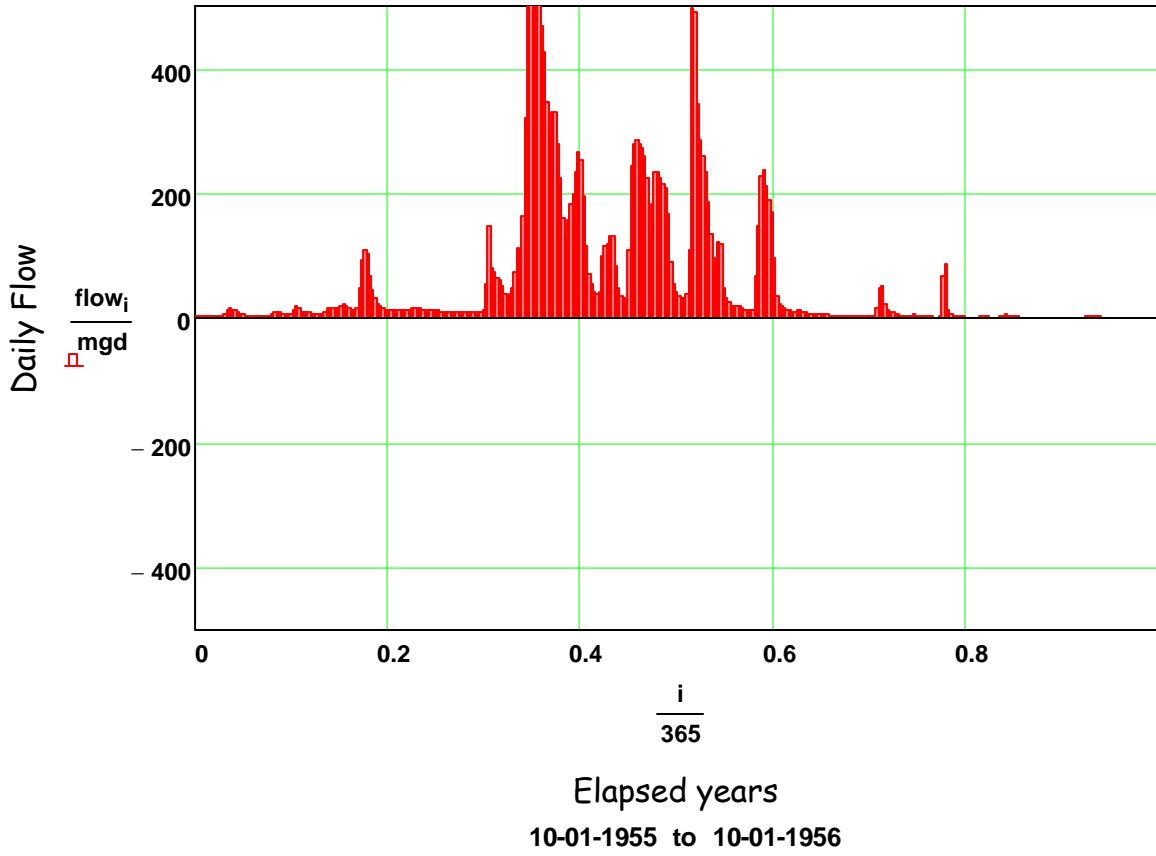
```
Rank(flow) := | sorted ← sort(flow)
                | for i ∈ 0..length(flow) - 1
                | | m ← match(flow_i, sorted) + 1
                | | rank_i ← mean(m)
                | rank
```

$RRank := Rank(flow)$

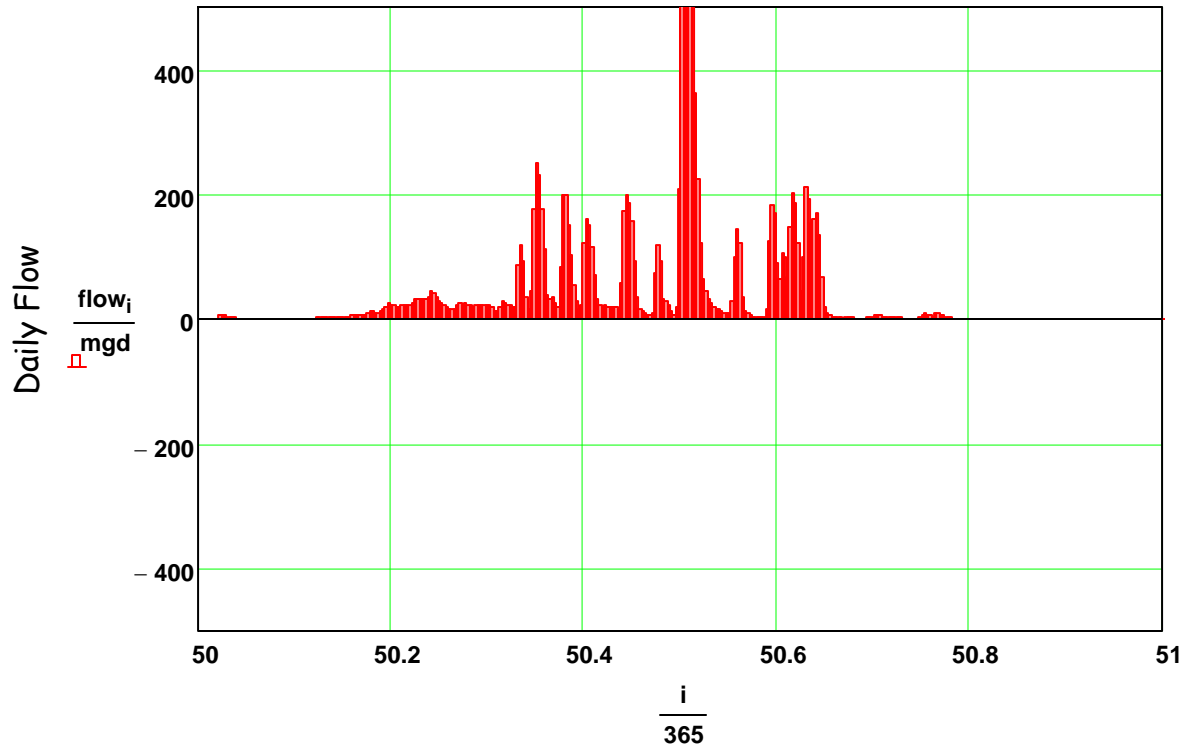
### Daily Flow - Little Corney Creek Gage



### Daily Flow - Corney Creek Gage 55-56 Water Year



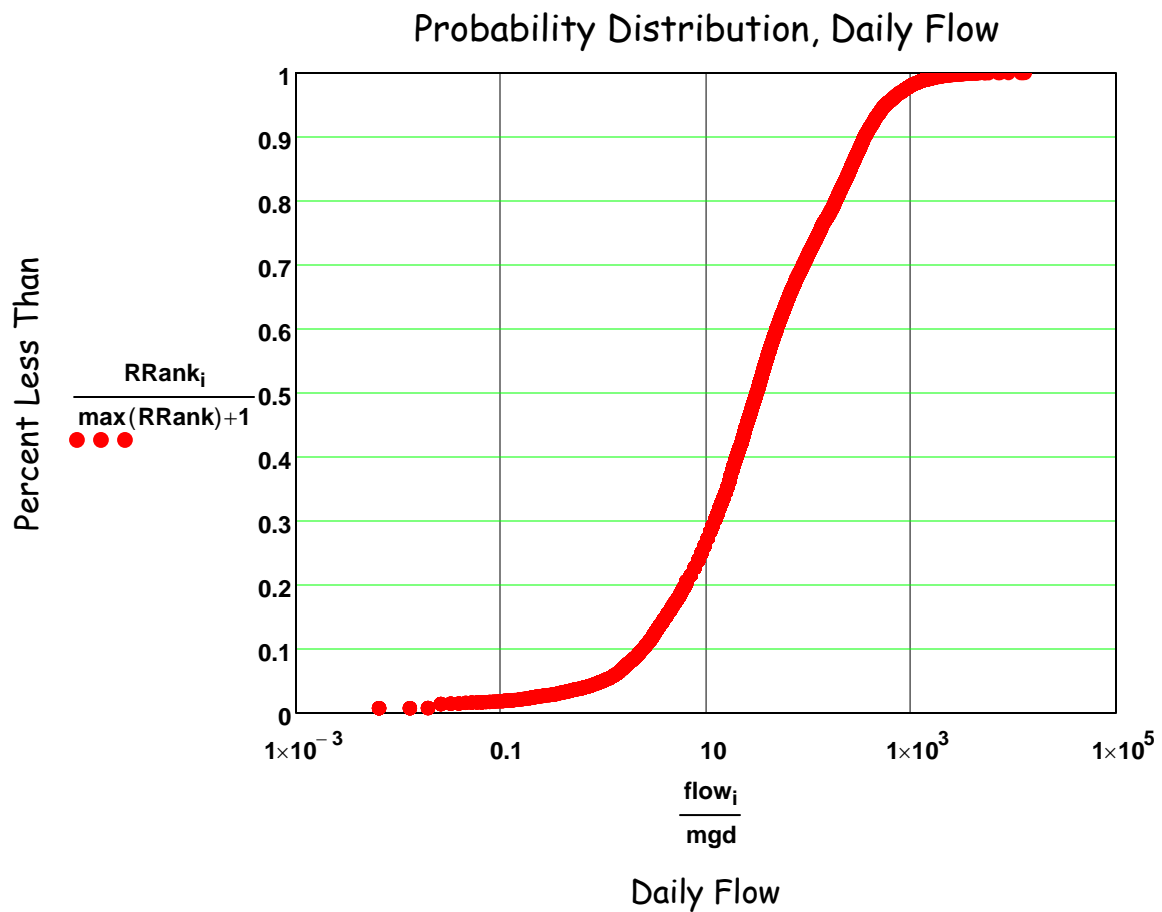
### Daily Flow - Corney Creek Gage 05-06 Water Year



Elapsed years  
10-1-2005 to 10-1-2006

## Empirical Probability Distribution - Corney Creek

This procedure involves plotting the magnitude of the daily flow against its probability of occurrence computed using the Weibel plotting position equation. The only assumption involved is that the data set is representative and future data will have the same statistical characteristics.



**50 % Flow at Little Corney Bayou Gage - 31 MGD**

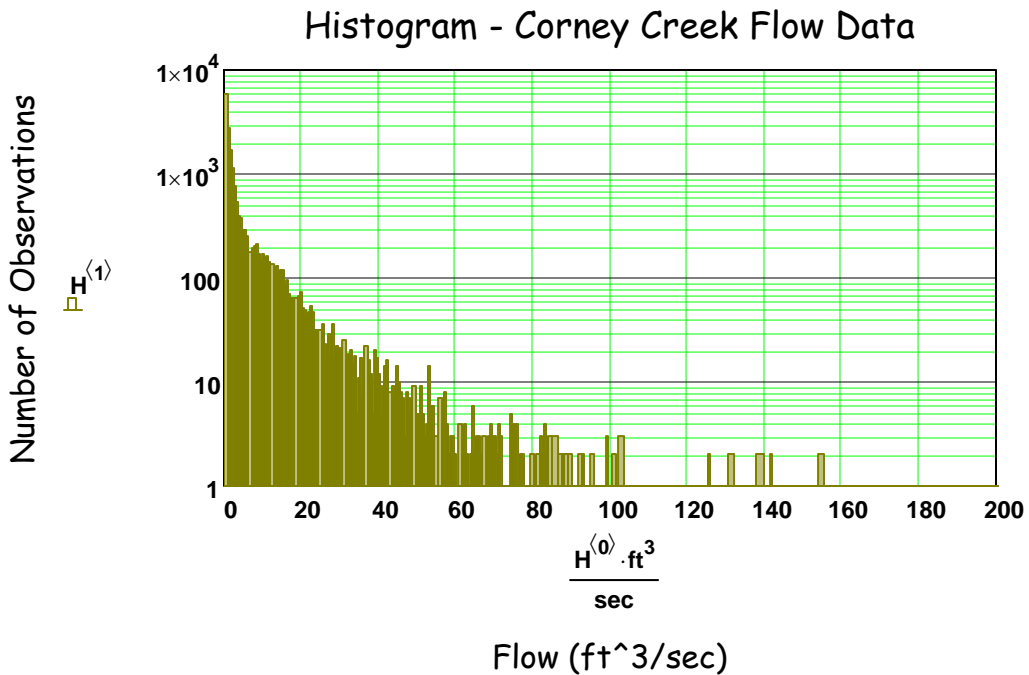
$$31 \cdot \text{mgd} = 47.964 \cdot \frac{\text{ft}^3}{\text{sec}}$$

**NOTE : According to the 1972 USGS report the average flow at this gage was 170 cfs based on record from 1955 to 1968**

essentially all flow less than 800 mgd

$$\text{flow}_i := \text{Corney\_creek\_data}_i \cdot 3 \cdot \frac{\text{ft}^3}{\text{sec}}$$

$$H := \text{histogram} \left( 1000, \frac{\text{flow}}{\frac{\text{ft}^3}{\text{sec}}} \right)$$





The distribution of flows is highly skewed to the right. Daily flow data are, in general, not amenable to analysis using known statistical distributions because the values are not independent.