(1)

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i \; = \; 2712.716$$

Ordered data:

2012, 2027, 2109, 2141, 2157, 2201, 2219, 2222, 2237, 2249, 2259, 2266, 2290, 2323, 2349, 2360, 2372, 2410, 2411, 2436, 2438, 2450, 2453, 2458, 2461, 2474, 2494, 2497, 2507, 2518, 2518, 2542, 2544, 2565, 2574, 2578, 2579, 2582, 2583, 2613, 2614, 2632, 2642, 2658, 2671, 2689, 2697, 2709, 2712, 2716, 2737, 2746, 2751, 2758, 2773, 2795, 2806, 2815, 2848, 2855, 2871, 2879, 2881, 2884, 2884, 2905, 2961, 2985, 3049, 3059, 3075, 3092, 3112, 3118, 3159, 3163, 3181, 3196, 3237, 3267, 3275, 3281, 3350, 3401, 3465, 3513, 3659, 3715

Median = $\frac{2658+2671}{2} = 2664.5$

(2) It is possible to understand if the mean flow is increasing or decreasing over time by calculating the covariance between the time and the river flow:

$$\bar{t} = \frac{1912 + 1913 + \cdots + 1999}{88} \; = \; 1955.5$$

$$\sigma_{xt} = \frac{1}{n}\sum_{i=1}^{n} x_i t_i - \bar{x}\bar{t} \; = \; 1254.028$$

Since the covariance is positive, the flow is increasing over time.