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极端干旱水文年(2006)中长江河口的盐水入侵

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Saltwater intrusion in the Changjiang Estuary in the extremely drought hydrological year 2006

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摘要 观测资料表明, 由于在2006年夏季中长江流域发生了特大干旱, 形成的特低径流量导致长江河口盐水倒灌比常年提前了3个月。北支倒灌盐水在南北支分汉口南支水域, 底层盐度大于表层盐度, 垂向分层明显, 而在南支中上段其他水域, 因强烈潮混合作用盐度垂向分布均匀。受北支盐水倒灌和盐量的累积作用, 在南北支分汉口崇头盐度最大值出现时间比青龙港潮位最高时间滞后约3d, 倒灌的高盐水团进入南支后受径流作用影响到下游陈行水库的时间约为2d。

关键词: 长江河口 特枯水文 盐水入侵 现场观测 长江河口 特枯水文 盐水入侵 现场观测

Abstract: It was observed that the extremely low discharges of the Changjiang River, caused by a serious drought in the river's basin in summer 2006, made a strong saltwater spring over the North Branch in the Changjiang Estuary occurred in that year 3 months earlier than usual. The salinity at surface was higher than the one at bottom in the South Branch near the bifurcation of the South and North branches, vertical stratification was obvious, whereas the salinity was vertical homogeneous in the other place of the South Branch due to the strong vertical tidal mixing. Due to the effect of saltwater spilling over from the North Branch into the South Branch and salinity accumulation, the occurred time of the maximum salinity at the Chongtou was about 3 days later than that of the highest tidal level at Qinglonggang, and it took about 2 days for the spilling over saltwater to the down stream Chenhang reservoir by the river discharge.

Key words: extremely drought hydrological year saltwater intrusion in situ observation Changjiang Estuary extremely drought hydrological year saltwater intrusion in situ observation

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