Contents

Background

What’s the problem?

Solution

How to solve the problem?

Practices

Main work we have done!

Prospect

What’s the next we want to do?

- 旧金山湾区：
  面积：1.79万平方公里
  GDP：0.8万亿美元
  人口：760万人

- 粤港澳大湾区：
  面积：5.6万平方公里
  GDP：1.3万亿美元
  人口：6672万人

- 纽约湾区：
  面积：0.08万平方公里
  GDP：1.8万亿美元
  人口：4384万人
Water Supply Crisis in Pearl River Delta

- **Rain distribution**
  - Drought Period (22%)
  - Flood Period (78%)
  - Lowest 3-Month (7%)

- **Background**

- **Drought period**
  - Nov.-Feb.

- **Salt tide**

- **Flood Period**
  - 78%

- **Drought Period**
  - 22%

- **Lowest 3-Month**
  - 7%

- **MACAU - Pumping station**

- **15 million people were affected**

- **2005年冬春**
  - 2004年冬春

- **Salt tide**

- **Water Supply Crisis in Pearl River Delta**
**Primary Mission**
- Non-Engineering Measures
  - Local water saving
  - Basin unified regulations
- Engineering Measures
  - Local reservoirs and Water intake system
  - Basin allocation project

**Major Difficulties**
- Changing boundary conditions
- Complex mechanism of salt tides
- Long term forecasting and operating
- Coordination: Multi-province + Multi-industry + Multi-specialty

**Goals**
- Ensure water supply in Delta

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**Solution**

*Emergency Operation and Long Term Plan*
Water Allocation

Solution

Risk Management

Flood

(Sept.-Oct.)

Store Water

Upper reservoir

Control

Down Stream

Hydro Power

Supply Water

Runoff

(SEPT.-OCT.)

(NOV.-FEB.)

Legend

- Tide Controlled Line
- Natural Line
- After Operation

Solution

Store Water

Supply Water

Hydro Power

Risk Management

Flood

(Sept.-Oct.)

(Oct.-Feb.)

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(Oct.-Feb.)

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- Natural Line
- After Operation
The 1st stage
2005-2006
Emergency Response
15 days Per time

The 2nd stage
2006-2010
Planning & Construction
6 months Per year

The 3rd stage
2011-2017
Unified Scheduling
8 months Per year

Basin Operation and Plan implementation

Emergency Response
Pumping Station

Planning & Construction
Pipes

Unified Scheduling
Reservoirs

MACAO
We win:
Ensure water supply safety

ALL-win:
Power safety shipping ecology

For 14 straight years
Thank You!