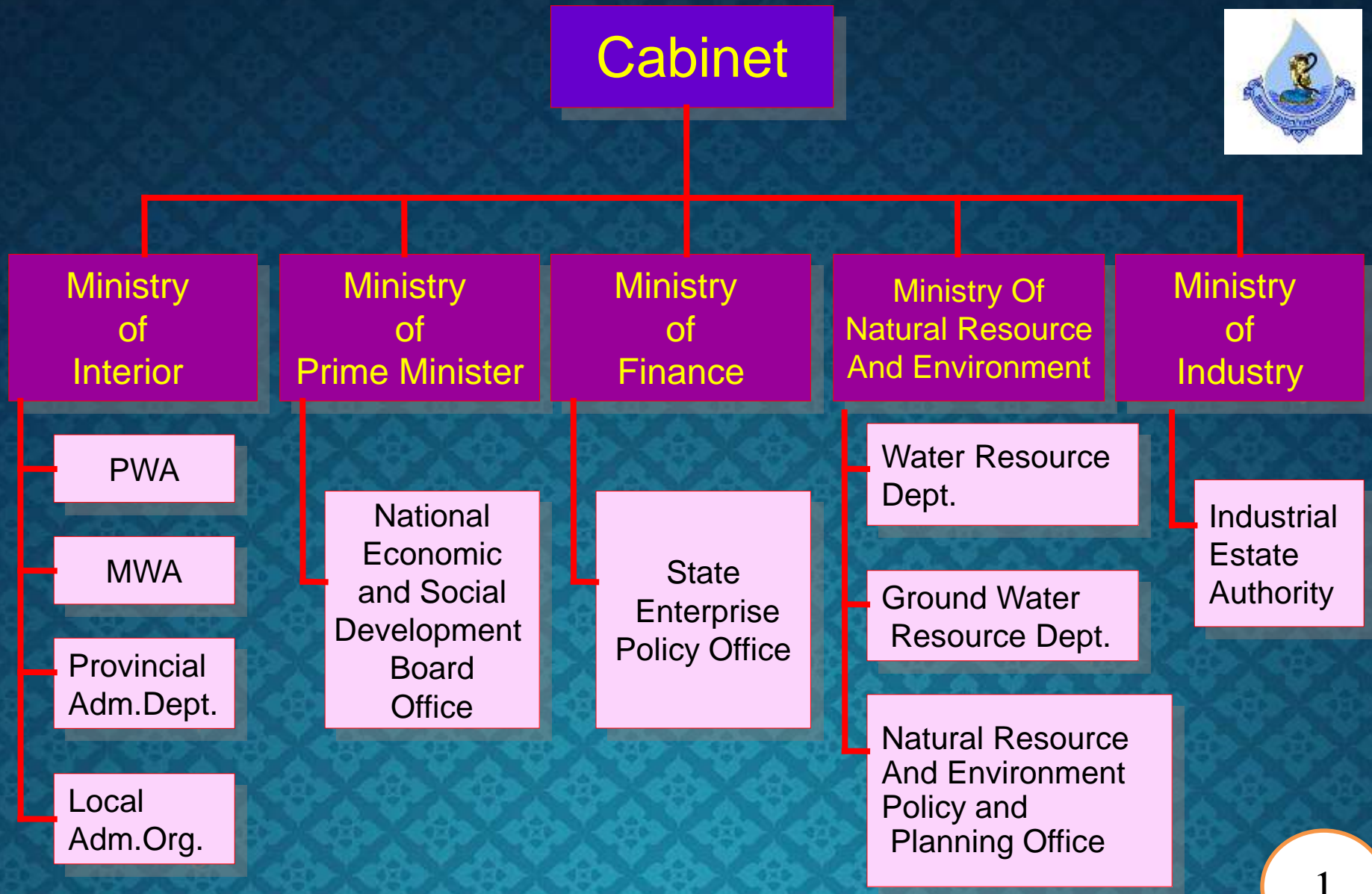




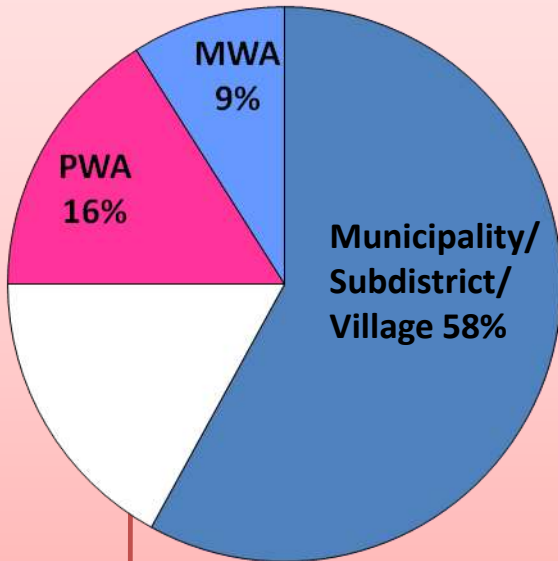
# Water Supply in Provincial Area of Thailand

- Challenges of NRW management
- Public Private Partnerships

# MAJOR AGENCIES CONCERNED WITH WATER SUPPLY IN THAILAND



# Water Supply Service in Thailand



**No tap water 17 %**



## Water Supply Service Agencies in Thailand

### ❖ PWA (16%)

(Across the country except Bangkok, Nonthaburi, Samutprakarn and Local Authority water supply system)

3.7 mil. connections



### ❖ MWA. (9%)

Bangkok, Nonthaburi, Samutprakarn  
2.1 mil.connections



### ❖ Municipality / Subdistrict /Village (58%)

14.4 Mil. Connections





## PWA SERVICE AREAS



★ PWA Headquarters

★ 10 Regional Offices

★ 234 Waterworks

★ 74 Provinces

★ 3.7 Million connections

# Vision

Customer delight with water quality and excellent services



# Mission

TO PRODUCE AND DISTRIBUTE WATER

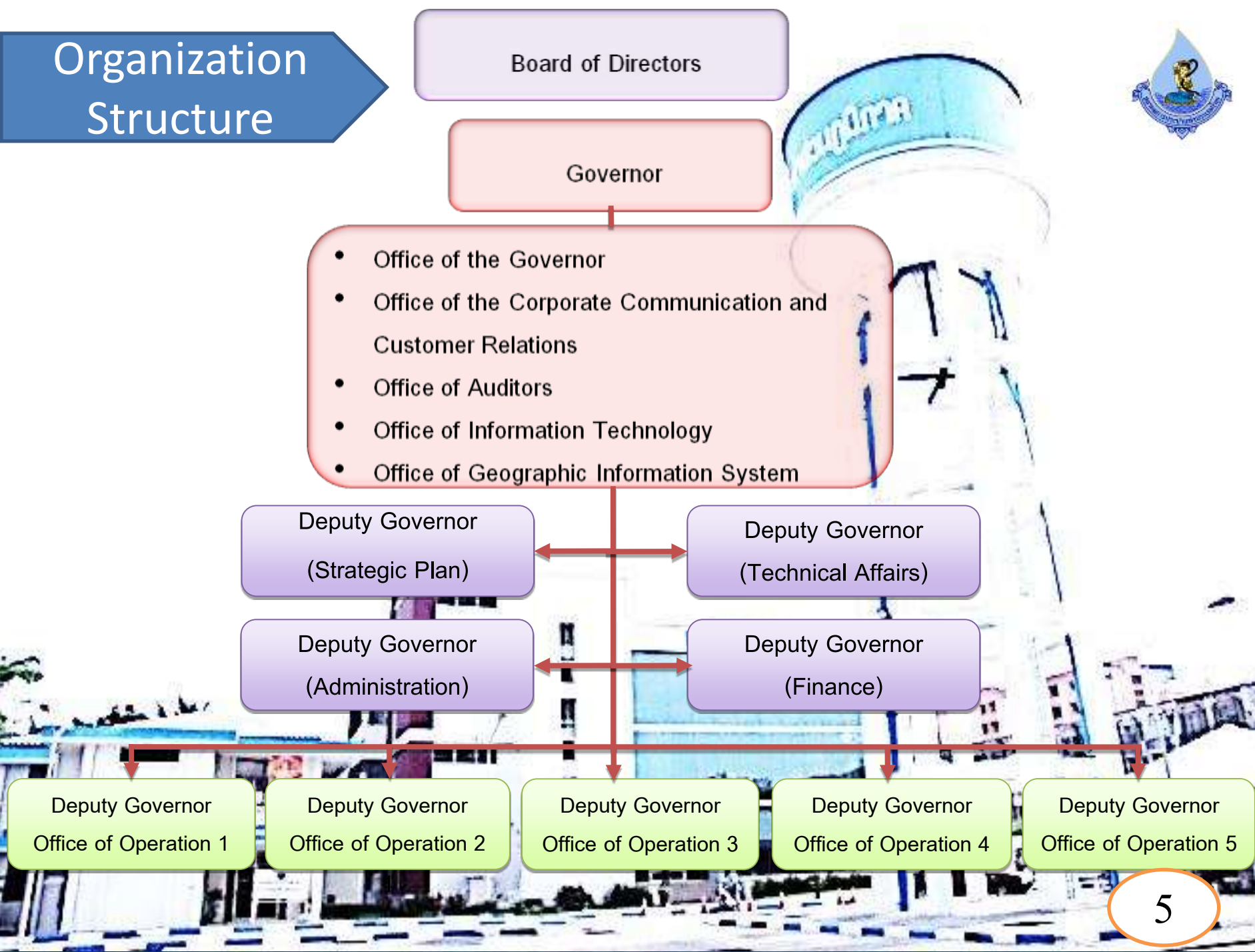
TO INCREASE EFFICIENCY AND EFFECTIVENESS OF WATER SUPPLY PRODUCTION AND DISTRIBUTION SYSTEMS

TO REINFORCE CUSTOMER-CENTERED SERVICES

TO DEVELOP INFORMATION TECHNOLOGY SYSTEMS

TO ENHANCE HUMAN RESOURCE CAPABILITIES

# Organization Structure





# HPPO

Year 2018 - 2021

สู่การเป็นองค์กรระดับโลก  
(Global Organization)



Year 2016 - 2018

สู่การเป็นองค์กรที่มีระบบเทคโนโลยีฯ ครบวงจร  
(Smart Information Technology Organization)



Year 2014 - 2016

สู่การเป็นองค์กรแห่งการเรียนรู้  
(Learning Organization)



Year 2012 - 2015

สู่การเป็นองค์กรที่มีระบบผลิตจ่ายน้ำ  
และระบบบริการลูกค้าที่เป็นเลิศ  
(Operation & Customer Service Excellence)



# 3.7 Million Connections



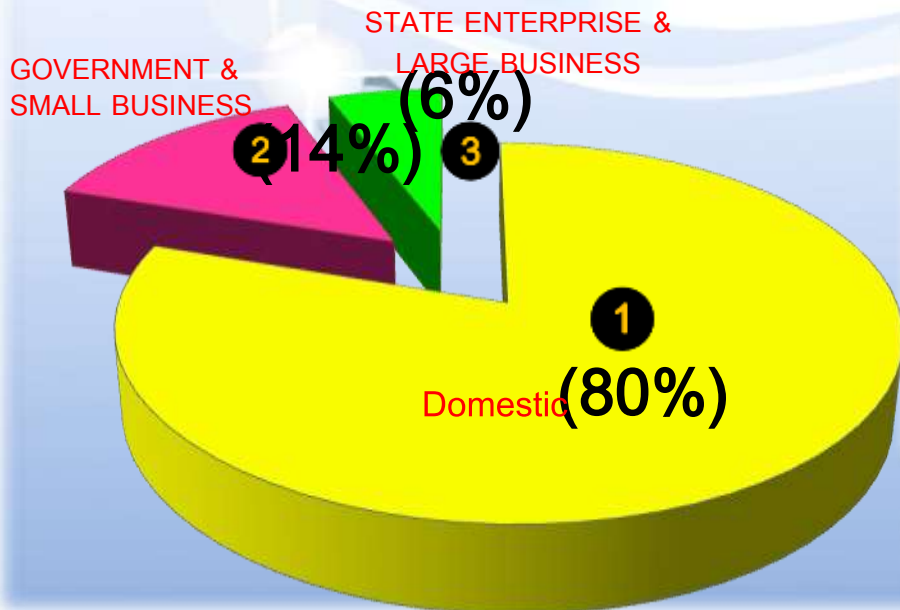
**GOVERNMENT & SMALL BUSINESS**  
0.52 Million Connections (14%)



**STATE ENTERPRISE & LARGE BUSINESS**  
0.22 Million Connections (6%)



**Domestic**  
2.96 Million Connections (80%)





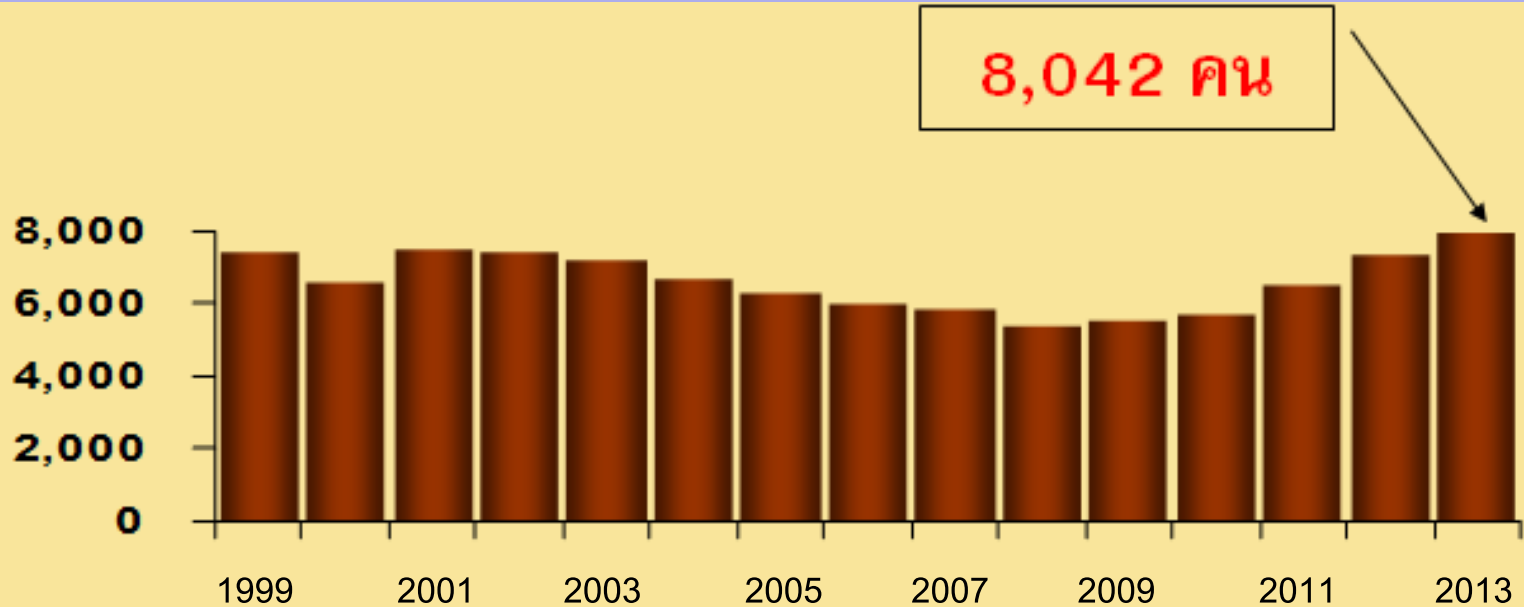
# SIZE OF PWA's WATERWORKS

## (CLASSIFIED BY NUMBER OF CUSTOMER)



Customers (Households/Connections)	Number of Waterworks	Proportion %
1-5,000	57	24
5,001-10,000	71	31
10,001-15,000	39	17
15,001-20,000	18	8
20,001-25,000	15	6
> 25,000	34	14
<b>Total</b>	<b>234</b>	<b>100</b>

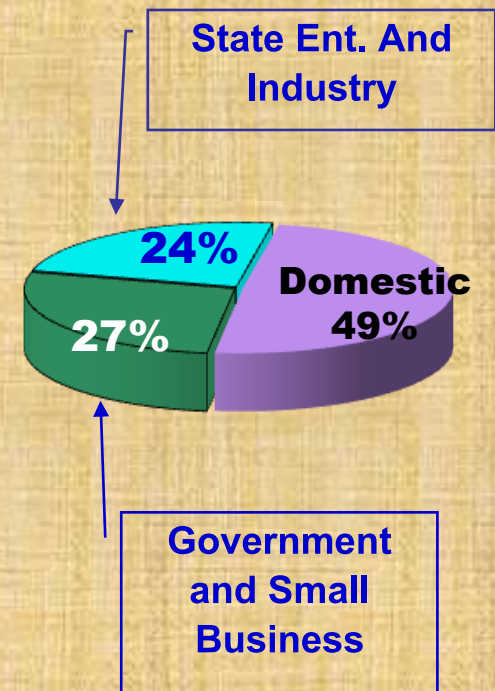
# NO. OF STAFF



## EARLY RETRY

YEAR	1999	2001	2003	2005	2007	2008 - 2013	SUM
PERSON	-	372	138	133	103	-	746

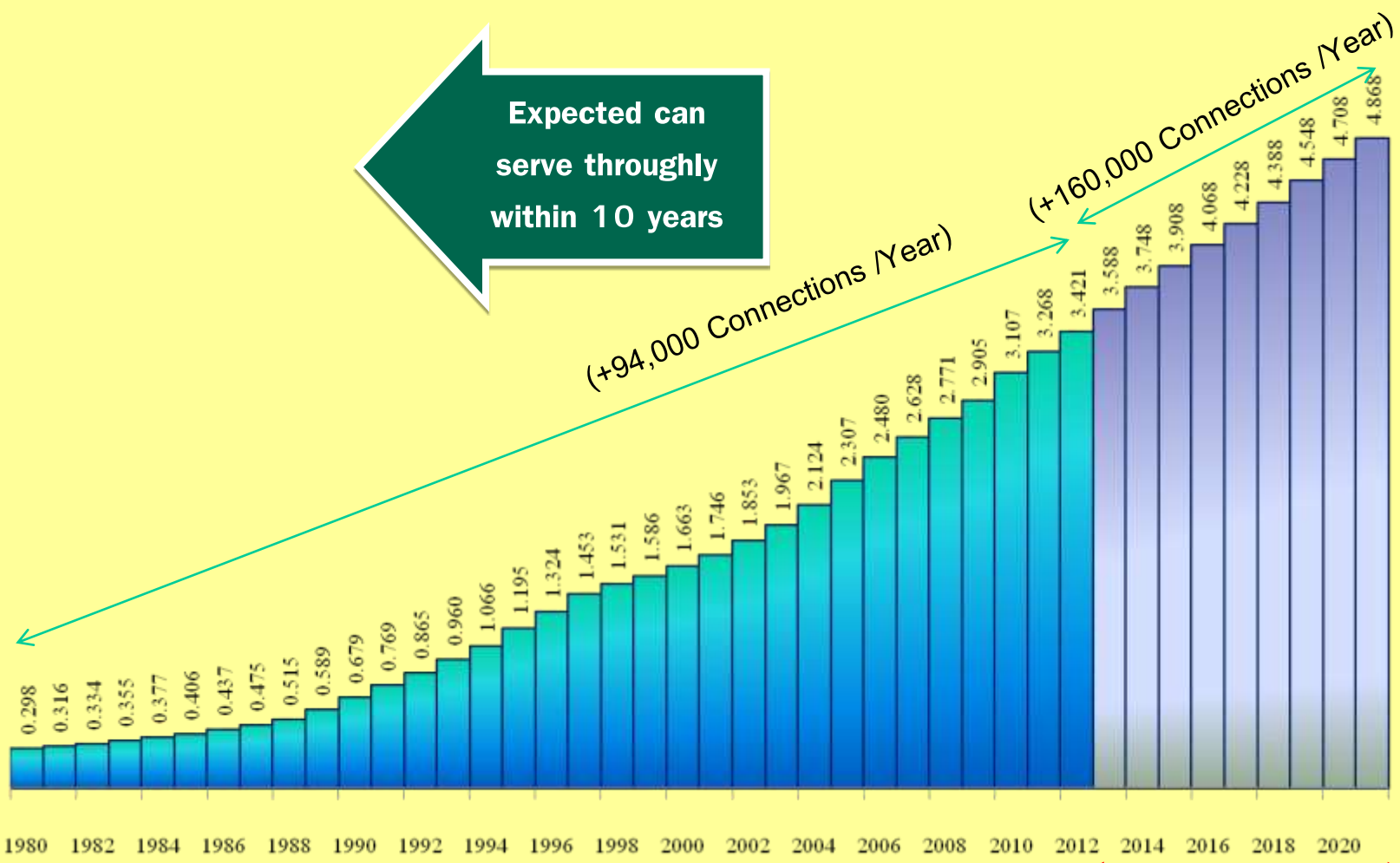
# PWA water supply services





# Population across the country (65 Million People/22.7 Million Household)

Expected can serve throughly within 10 years

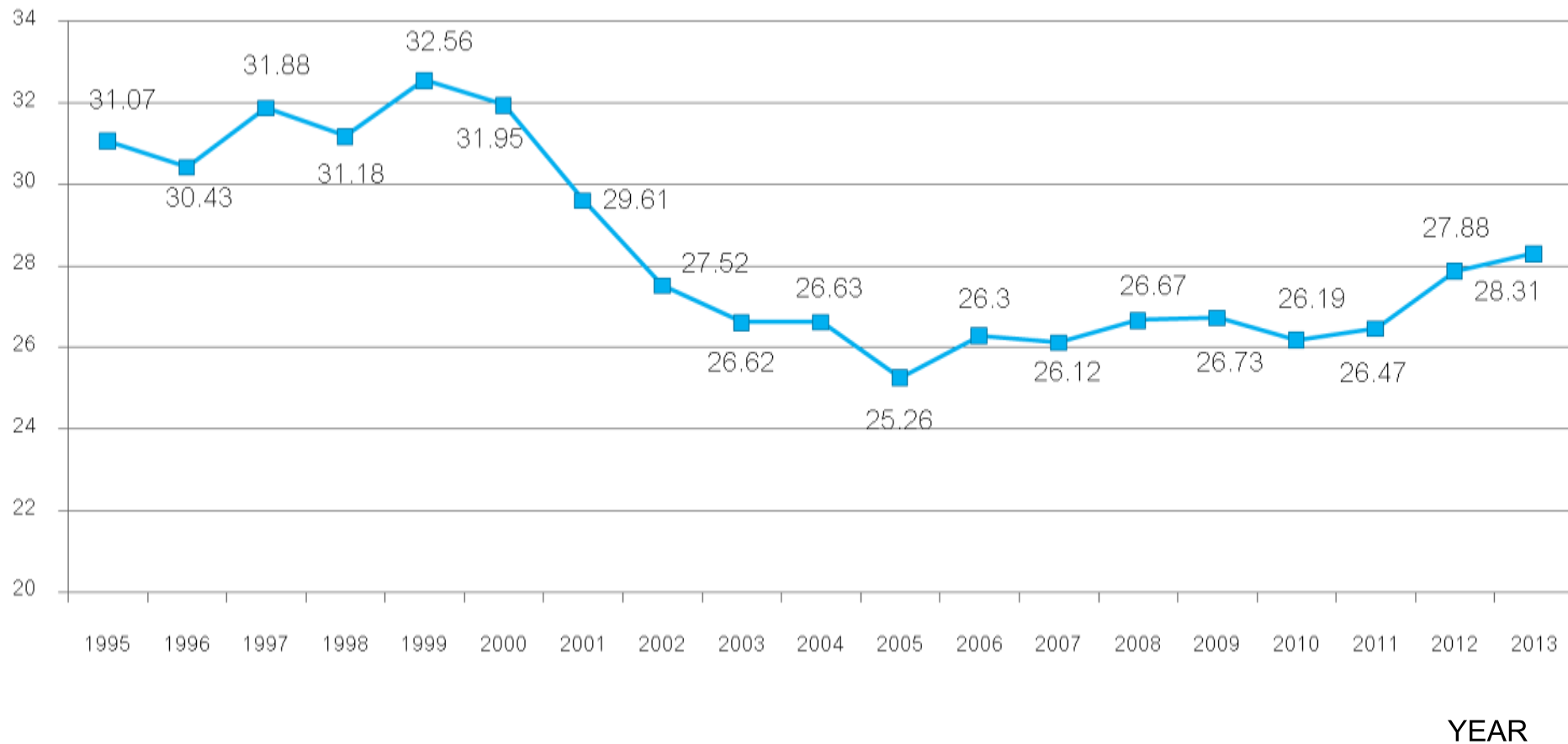


(Estimate)

# NRW 1995 - 2013



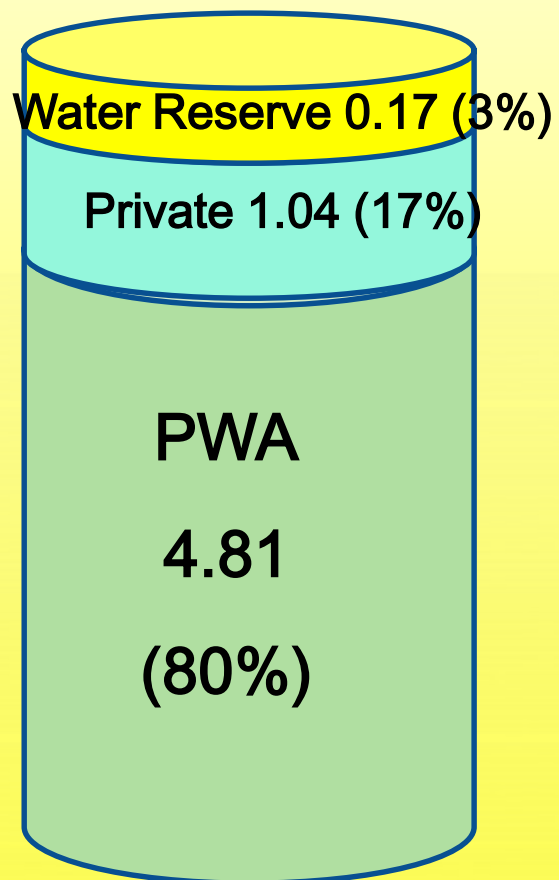
%



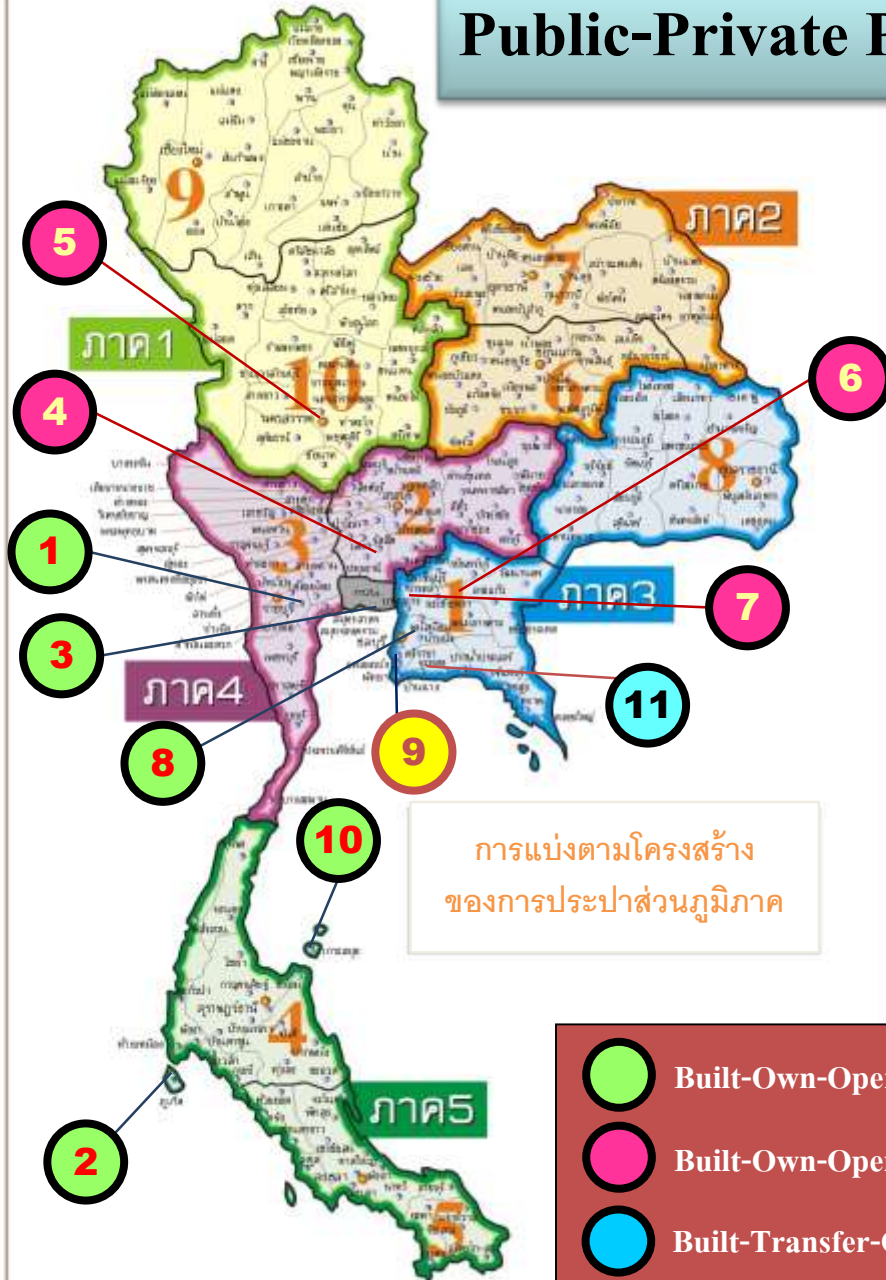


## Capacity

**Total 6.02** Million Cu.m/Day



# Public-Private Partnership project (PPP project)



1. Ratchaburi & Samutsongkram (BOO)
2. Phuket (BOO)
3. Nakhon Pathom & Samutsakhorn (BOO)
4. Pathumtani & Rungsit (bulk water) (BOOT)
5. Nakhon Sawan (BOOT)
6. Chachoengsao (BOOT)
7. Bangpakong (BOOT)
8. Phanat Nikhom – Baan Beung (BOO)
9. Sattahip (Lease Contract)
10. Koh Samui (RO) (BOO)
11. Rayong (BTO)



- Decrease burden of government subsidy
- Increase PWA's asset when contract ends (BOOT) or construction finishes (BTO)
- Resolve water shortage problem in PWA service areas
- Increase water coverage areas as planned
- Increase sale volumes of water supply
- Stipulate effective management
- Introduce technology for water production and water loss control



## Cons




- Increase higher unit cost of water due to the yearly adjustment of water sale according to the contract
- Increase operating cost in PWA branch areas where PPP is used
- Make PWA staff lack of skill since private companies run the operation for a long time during the contract period
- Consume time of project process in accordance with rules and regulations specified in the PPP Act
- The service may not meet customer 's demand since it is profit -driven


# The group of waterworks for determination the direction of NRW management on 2014 – 2016.




Classify waterworks for NRW management into 3 groups:



Group1 Not more than 15,000 connections (Small Group: S=169 waterworks.)  
The water production system was designed by PWA and the equipments were installed by private company, after that PWA will take the management.



Group 2 Between 15,000 – 40,000 connections (Medium Group: M=41 waterworks.) The water production system was designed by PWA or private company and the equipments were installed by private company. PWA will take the management (if ready) or hires private company taking the management 2 years.



Group 3 More than 40,000 connections (Large Group: L= 21 waterworks.)  
The water production system was designed by PWA or private company and the equipments were installed by private company. PWA will take the management (if ready) or hires private company taking the management 3 years.

# The determination of NRW management



The determination of NRW management can be specified into 4 types:

1

PWA operates and hires private company to install the equipment following PWA's plan.

2

PWA hires private company to design, install and operate (without DMA)

3

PWA hires private company to design, install and operate (already have DMA)

4

PWA hires private company to design, install and operate (already have DMA). PWA will pay incentive if they achieve the specific goal (In case of waterworks that has higher cost of water)



Thank  
you!

