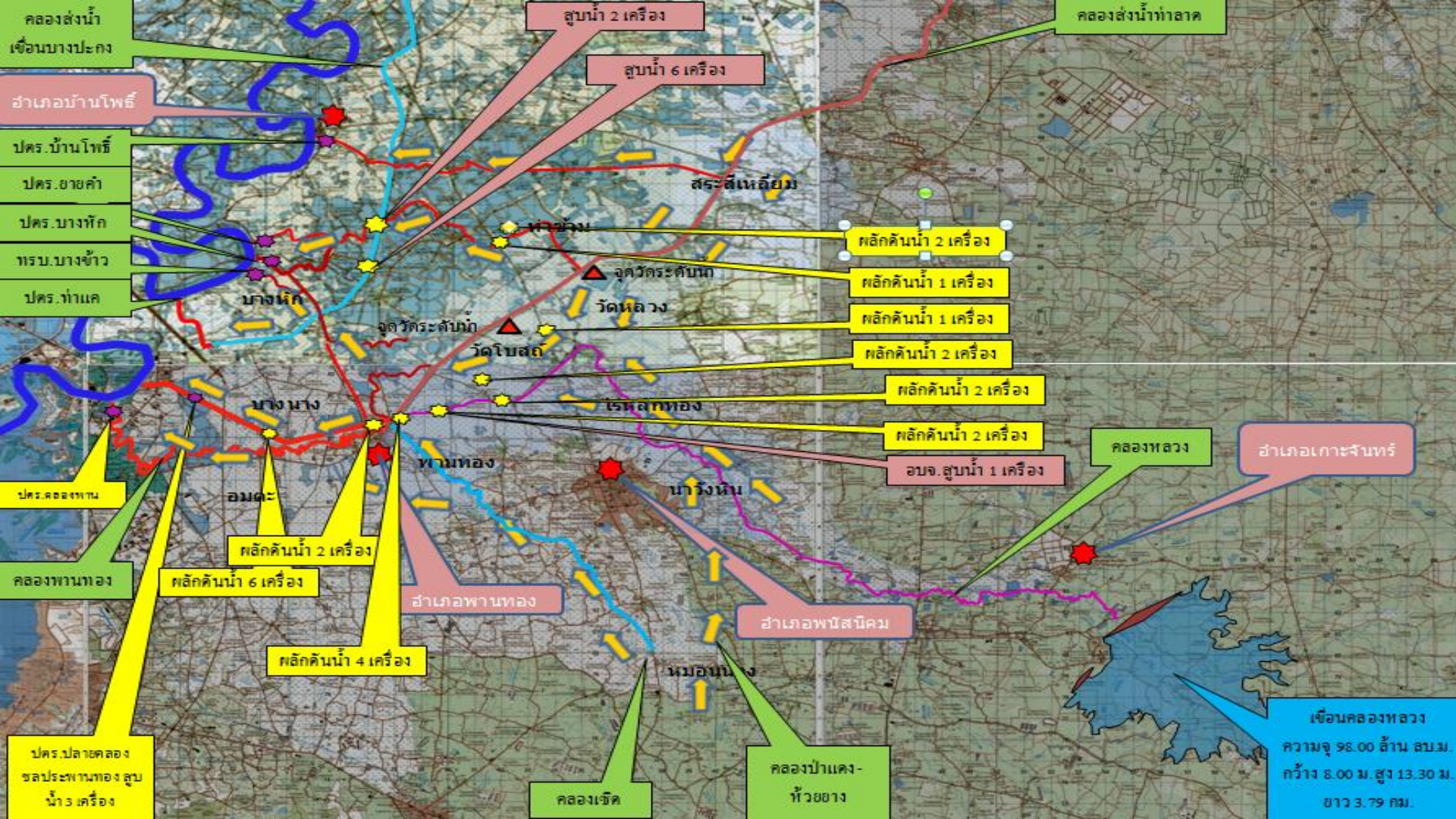


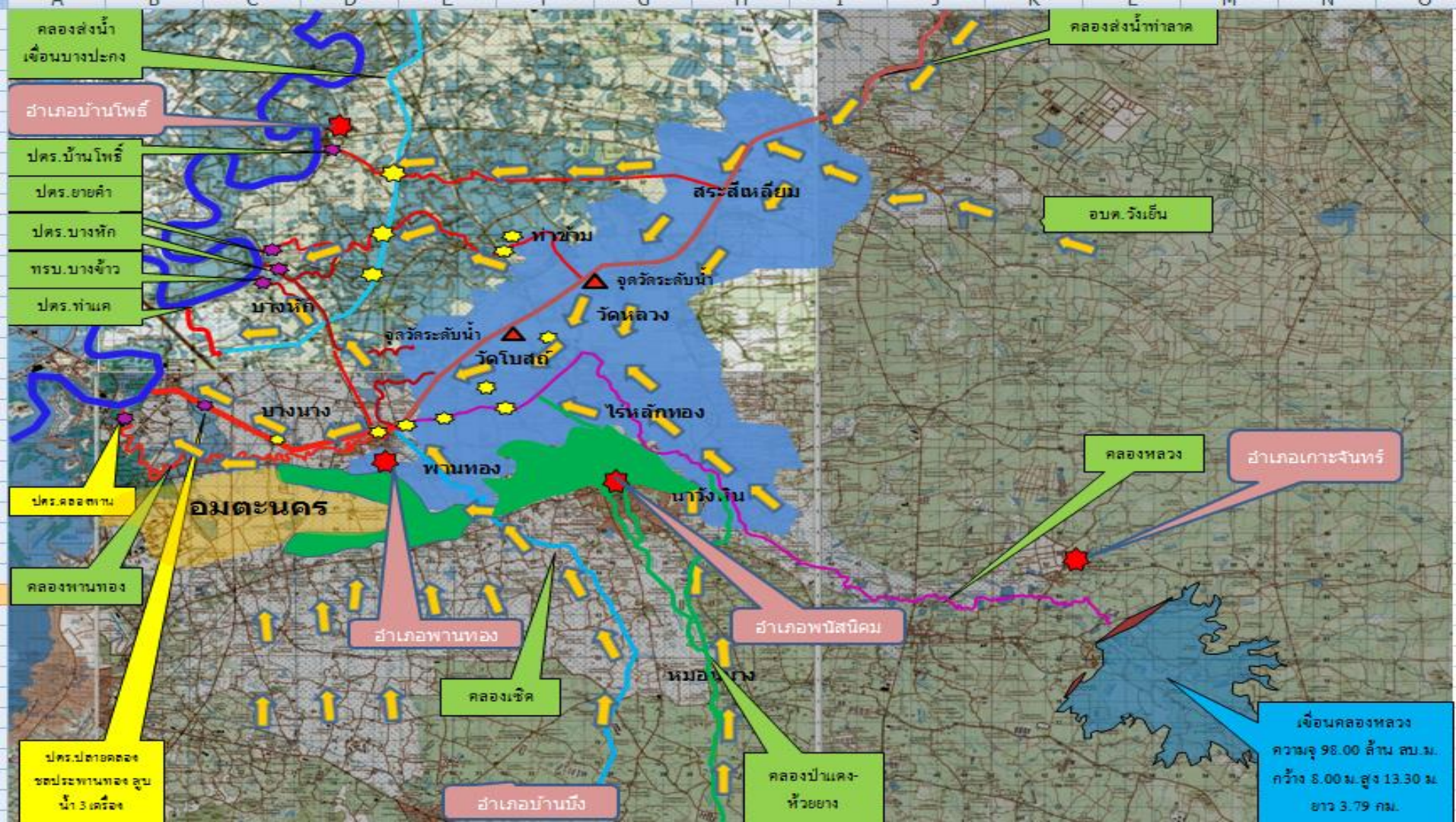


**Meeting on the Brief Summary of  
the Water Situation at Amata Nakorn**

**Oct 14 ,2013**











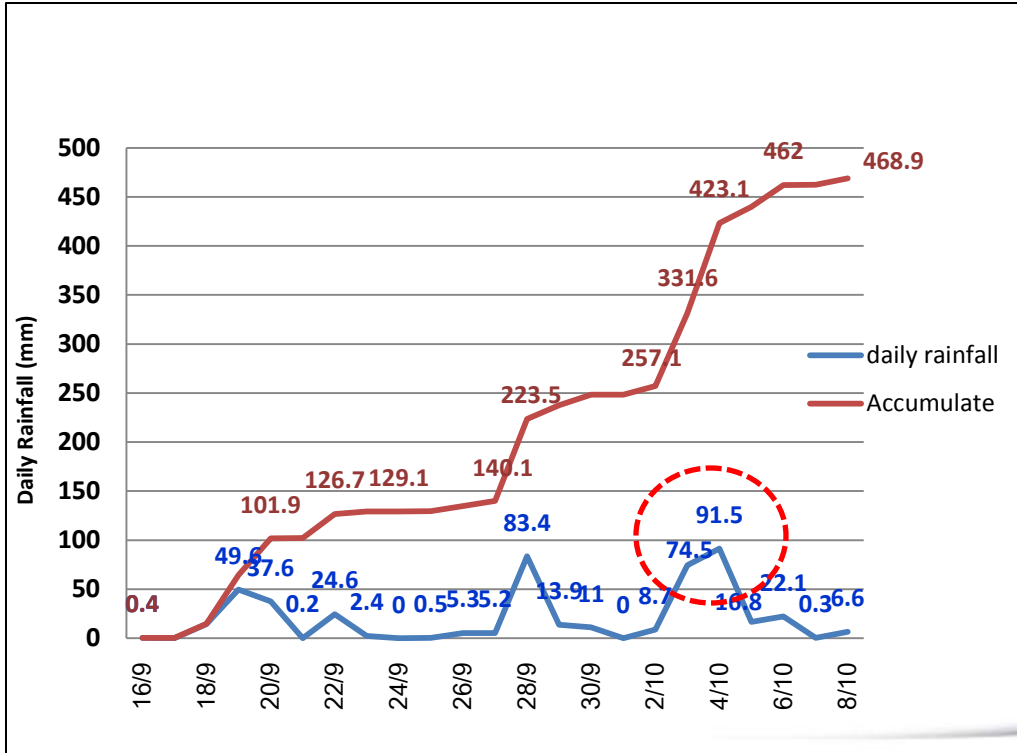
# Causes of Flood

- Heavy Rain continually occurred in the areas during Sep. 27-29, 2013 and Oct.4-7, 2013.
- Road Construction ; Route 3466 Ban Kao-Phan Thong resulted to draining water out slowly.
- High Tide affected proceeding water drainage into public canals slowly.
- AMATA Nakorn helped to relieve troubles of surrounding community by allowing some water flowing into our areas.



# Graph of Accumulated Rainfall Record (16<sup>th</sup> Sep -8<sup>th</sup> Oct,2013)

Daily Rainfall (mm)



58

ปากน้ำบางปะกง (ฉะเชิงเทรา)  
Pak Nam Bang Pakong (Chachoengsao)

ละติจูด (Lat) 13° 30' 03" N.00

ลองจิจูด (Long) 100° 59' 16" E.03

ฤดูกาล ๒๕๕๖

October 2013

วันที่ DATE	HOURS 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23																							
	HEIGHTS OF WATER IN METERS																							
1	1.7	1.7	1.7	1.6	1.5	1.3	1.2	1.1	1.1	1.2	1.4	1.7	2.0	2.3	2.5	2.6	2.6	2.5	2.3	2.1	1.8	1.7	1.6	
2	1.6	1.7	1.8	1.8	1.8	1.8	1.6	1.4	1.3	1.1	1.1	1.2	1.4	1.8	2.2	2.5	2.6	2.7	2.6	2.3	2.1	1.8	1.5	1.4
3	1.4	1.5	1.8	2.0	2.1	2.1	2.0	1.7	1.5	1.3	1.1	1.1	1.2	1.6	2.0	2.4	2.7	2.8	2.6	2.4	2.1	1.7	1.4	1.2
4	1.2	1.4	1.7	2.1	2.3	2.3	2.1	1.8	1.5	1.2	1.1	1.1	1.4	1.8	2.3	2.7	2.9	2.6	2.4	2.1	1.7	1.4	1.1	1.0
5	1.0	1.1	1.5	2.0	2.4	2.5	2.6	2.6	2.1	1.8	1.5	1.2	1.1	1.3	1.6	2.1	2.5	2.7	2.5	2.1	1.7	1.4	1.1	1.0
6	0.9	0.9	1.2	1.8	2.3	2.6	2.7	2.7	2.4	2.1	1.7	1.5	1.3	1.3	1.5	2.0	2.4	2.7	2.8	2.6	2.3	1.8	1.4	1.1
7	0.9	0.7	0.9	1.4	2.0	2.5	2.8	2.9	2.7	2.4	2.0	1.7	1.5	1.4	1.5	1.8	2.3	2.7	2.8	2.7	2.4	2.0	1.5	1.1
8	0.8	0.7	0.6	0.9	1.5	2.2	2.7	2.9	2.9	2.7	2.4	2.0	1.7	1.6	1.6	1.8	2.2	2.6	2.8	2.8	2.5	2.1	1.6	1.2
9	0.9	0.7	0.6	0.6	1.0	1.7	2.3	2.8	2.9	2.9	2.7	2.4	2.1	1.8	1.8	1.8	2.1	2.6	2.7	2.9	2.7	2.3	1.9	1.4
10	1.0	0.7	0.6	0.5	0.7	1.1	1.8	2.4	2.7	2.5	2.3	2.7	2.4	2.2	2.0	2.0	2.1	2.5	2.5	2.7	2.7	2.5	2.1	1.6
11	1.2	0.9	0.7	0.5	0.5	0.8	1.2	1.8	2.3	2.7	2.8	2.8	2.7	2.5	2.3	2.2	2.2	2.5	2.4	2.5	2.6	2.5	2.2	1.9
12	1.5	1.1	0.9	0.7	0.6	0.6	0.9	1.3	1.8	2.3	2.6	2.7	2.8	2.8	2.6	2.4	2.4	2.5	2.3	2.4	2.4	2.4	2.3	2.0
13	1.7	1.5	1.2	1.0	0.8	0.7	0.7	1.0	1.3	1.8	2.2	2.5	2.7	2.8	2.8	2.7	2.5	2.4	2.3	2.2	2.2	2.2	2.1	1.8
14	1.9	1.7	1.5	1.3	1.1	1.0	0.9	0.9	1.1	1.4	1.8	2.1	2.4	2.7	2.8	2.8	2.7	2.5	2.4	2.2	2.0	1.9	1.8	1.5
15	2.0	1.9	1.9	1.7	1.5	1.4	1.2	1.1	1.0	1.1	1.4	1.8	2.1	2.5	2.7	2.8	2.8	2.6	2.4	2.2	1.9	1.7	1.6	1.3
16	1.8	2.0	2.1	2.1	2.0	1.8	1.6	1.4	1.2	1.2	1.2	1.5	1.8	2.2	2.5	2.7	2.8	2.7	2.5	2.2	1.9	1.6	1.4	1.1
17	1.5	1.8	2.1	2.3	2.4	2.3	2.1	1.8	1.5	1.4	1.3	1.3	1.6	2.0	2.3	2.6	2.7	2.7	2.5	2.2	1.9	1.5	1.2	1.1
18	1.1	1.4	1.9	2.3	2.6	2.6	2.5	2.3	2.0	1.7	1.5	1.4	1.5	1.8	2.1	2.5	2.7	2.7	2.5	2.3	1.9	1.5	1.2	1.0
19	0.9	1.0	1.5	2.1	2.5	2.8	2.8	2.7	2.4	2.0	1.7	1.6	1.5	1.6	2.0	2.4	2.6	2.7	2.6	2.3	2.0	1.6	1.3	1.0
20	0.8	0.8	1.1	1.7	2.3	2.7	3.0	3.0	2.8	2.4	2.0	1.8	1.6	1.6	1.9	2.2	2.6	2.7	2.7	2.4	2.1	1.7	1.3	1.0
21	0.8	0.7	0.8	1.5	1.9	2.5	2.9	3.0	3.0	2.7	2.3	2.0	1.8	1.7	1.8	2.1	2.5	2.7	2.7	2.6	2.2	1.8	1.4	1.1
22	0.9	0.7	0.7	0.9	1.5	2.2	2.7	3.0	3.1	2.9	2.6	2.3	2.0	1.8	1.8	2.0	2.3	2.6	2.8	2.7	2.4	2.0	1.5	1.2
23	0.9	0.7	0.6	0.7	1.2	1.8	2.5	2.9	3.0	3.0	2.8	2.5	2.2	1.9	1.9	1.9	2.2	2.5	2.7	2.7	2.5	2.2	1.7	1.3
24	1.0	0.8	0.7	0.7	0.9	1.4	2.1	2.6	2.9	3.0	2.9	2.7	2.4	2.1	1.9	1.9	2.0	2.3	2.5	2.7	2.6	2.3	1.9	1.5
25	1.1	0.9	0.7	0.7	0.8	1.1	1.7	2.3	2.7	2.9	2.9	2.8	2.6	2.3	2.1	2.0	2.0	2.2	2.3	2.5	2.5	2.4	2.1	1.7
26	1.3	1.0	0.8	0.7	0.8	1.0	1.4	1.9	2.4	2.7	2.8	2.8	2.7	2.5	2.3	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.1	1.8
27	1.5	1.2	1.0	0.9	0.9	1.0	1.2	1.6	2.0	2.4	2.6	2.7	2.7	2.6	2.5	2.3	2.2	2.1	2.1	2.2	2.2	2.1	2.0	1.8
28	1.6	1.4	1.2	1.1	1.1	1.1	1.2	1.4	1.7	2.1	2.3	2.5	2.6	2.6	2.6	2.5	2.3	2.2	2.1	2.1	2.0	1.9	1.8	1.6
29	1.7	1.5	1.4	1.4	1.3	1.3	1.3	1.4	1.6	1.8	2.0	2.3	2.4	2.5	2.6	2.5	2.4	2.3	2.1	2.0	1.9	1.8	1.7	1.5
30	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.6	1.7	1.8	2.0	2.3	2.4	2.5	2.5	2.5	2.3	2.1	1.9	1.7	1.6	1.5	1.3
31	1.6	1.7	1.8	1.9	1.9	1.9	1.8	1.7	1.7	1.6	1.7	1.8	2.1	2.3	2.5	2.6	2.5	2.4	2.1	1.9	1.6	1.4	1.3	1.1



# Water Situation at AMATA Nakorn

**Oct.1-3, 2013 : Normal Situation**

**Oct.4, 2013 : Typhoon WUTIP caused heavy rain resulted to water flowing in Phase 6C , 7 , 8, 9**



**Road area in front of Rent (Thailand) Phase 8**



**Road area in front of Thai NOK Phase 8**



**Road area at entrance to Phase 9**



**Connecting Road to Phase 6C, 7, 8**

# Water Situation at AMATA Nakorn

Oct. 5, 2013 Water Level increased **more** due to continually heavy rain



**Mr. Komsan Eakachai**, Chonburi Provincial Governor,  
Investigated water situation at AMATA Nakorn

Water Pumps at Frontage Road under motorway bridge



Road Area at Phase 9



Meeting with some customers in Phase 7-9  
affected from water

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# Water Situation at AMATA Nakorn

**Oct. 6, 2013** Water Level increased due to continually heavy rain



**Meeting between IEAT and AMATA  
to analyze the water situation**



**Connecting Road to Phase 6C, 7, 8**



**Water flowing onto road surface resulted to close the traffic at the entrance to Phase 9**

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# Water Situation at AMATA Nakorn

**Oct. 7, 2013** Water Level remained, AMATA installed more water pumps for rapidly draining



**Road area at entrance to Phase 9**



**Additional Water Pumps Installation beside  
Siam DENSO Manufacturing Co.,Ltd.**



**Connecting Road to Phase 6C, 7, 8**



# Water Situation at AMATA Nakorn

Oct.8, 2013 Explanation Meeting on Water Situation Update & Protection Plan with Customers by IEAT and AMATA  
Provided Sandbags to customers affected .



**Mr.Suphap Kleekachai**, Advisor to Minister of Industry

**Dr.Verapong Chaiperm**, Governor of IEAT

**Mr.Viboon Kromadit**, Director , CMO and Acting COO of AMATA

jointly participated in a meeting to analyze the water situation  
at AMATA Nakorn

**Mr.Prasert Boonchaisuk**, Minister of Industry,

**Mr.Witoon Simachokedee**,

Permanent Secretary of Ministry of Industry  
visited AMATA Nakorn to analyze the water situation



# Water Situation at AMATA Nakorn

**Oct.8, 2013 Explanation Meeting on Water Situation Update & Protection Plan with Customers by IEAT and AMATA  
Provided Sandbags to customers affected .**



**Many Customers attended Meeting**



**AMATA operated fire engine for  
water drainage to reduce water level**



**In front of OTA Park Phase 7**



**AMATA provided free sandbags to  
customers affected.**



## Water Situation at AMATA Nakorn

Oct.9, 2013 Water Level reduced in some areas. AMATA installed additional water pumps, water pushing machines with Military Force Support for containing sandbags at AMATA Nakorn



**Mr. Prasert Boonchaisuk**, Minister of Industry  
**Dr. Veerapong Chaiperm**, Governor of IEAT  
**Lt. Gen Teerachai Nakwanich**, 1<sup>st</sup> Army Commander  
**Mr. Viboon Kromadit**, Director, CMO and Acting COO  
of AMATA joined the meeting on Water Situation  
Update and Investigated at AMATA Nakorn



**Mr. Chadchart Sittipunt**, Minister of Transport  
Investigated water situation at AMATA Nakorn

# Water Situation at AMATA Nakorn

Oct.9, 2013



Install additional **water pushing machines** into several canals concerned



Install additional **water pumps** into several canals concerned



1<sup>st</sup> Army supported Military Force helping to contain sandbags



## Water Situation at AMATA Nakorn

**Oct.10, 2013** Water Level significantly reduced , some water left only in some areas, with support of GMC Military Trucks, Police Force to facilitate traffic & traveling for employees working in AMATA Nakorn , More pumps installed



**Mr.Prasert Boonchaisuk**, Minister of Industry  
**Mr.Jakkarat Lertopas**, Deputy Governor of IEAT  
Representative from 1<sup>st</sup> Army Commander,  
Followed up and analyze the water situation  
at AMATA Nakorn

# Water Situation at AMATA Nakorn

**Oct.10, 2013** Water Level significantly reduced , some water left only in some areas, with support of GMC Military Trucks, Police Force to facilitate traffic & traveling for employees working in AMATA Nakorn , More pumps installed



**In front of OTA Park Phase 7 ,  
only little bit water left**



**Additional Water Pumps were  
continually installed in several  
canals concerned to reduce  
water level in AMATA Nakorn**



**1<sup>st</sup> Army supported  
GMC Military Trucks  
to pick-up and drop-off  
employees working in  
AMATA Nakorn Phase 7-9**



**At Entrance to Phase 9  
Water Level significantly  
reduced and almost  
returned to be normal.  
Open traffic way inside,  
can turn left  
(minor way)**



**Police Force support  
for traffic facilitation**

# Water Situation at AMATA Nakorn

**Oct.11, 2013** Some water left in some areas only, Installed more water pumps & water pushing machines,  
Open traffic way at entrance to Phase 9 (main way) , Phase 7-8 areas returned to normal situation.



Install additional **water pushing machines**  
into several canals concerned



Install additional **water pumps**  
at Klong Phan Thong Water Gate



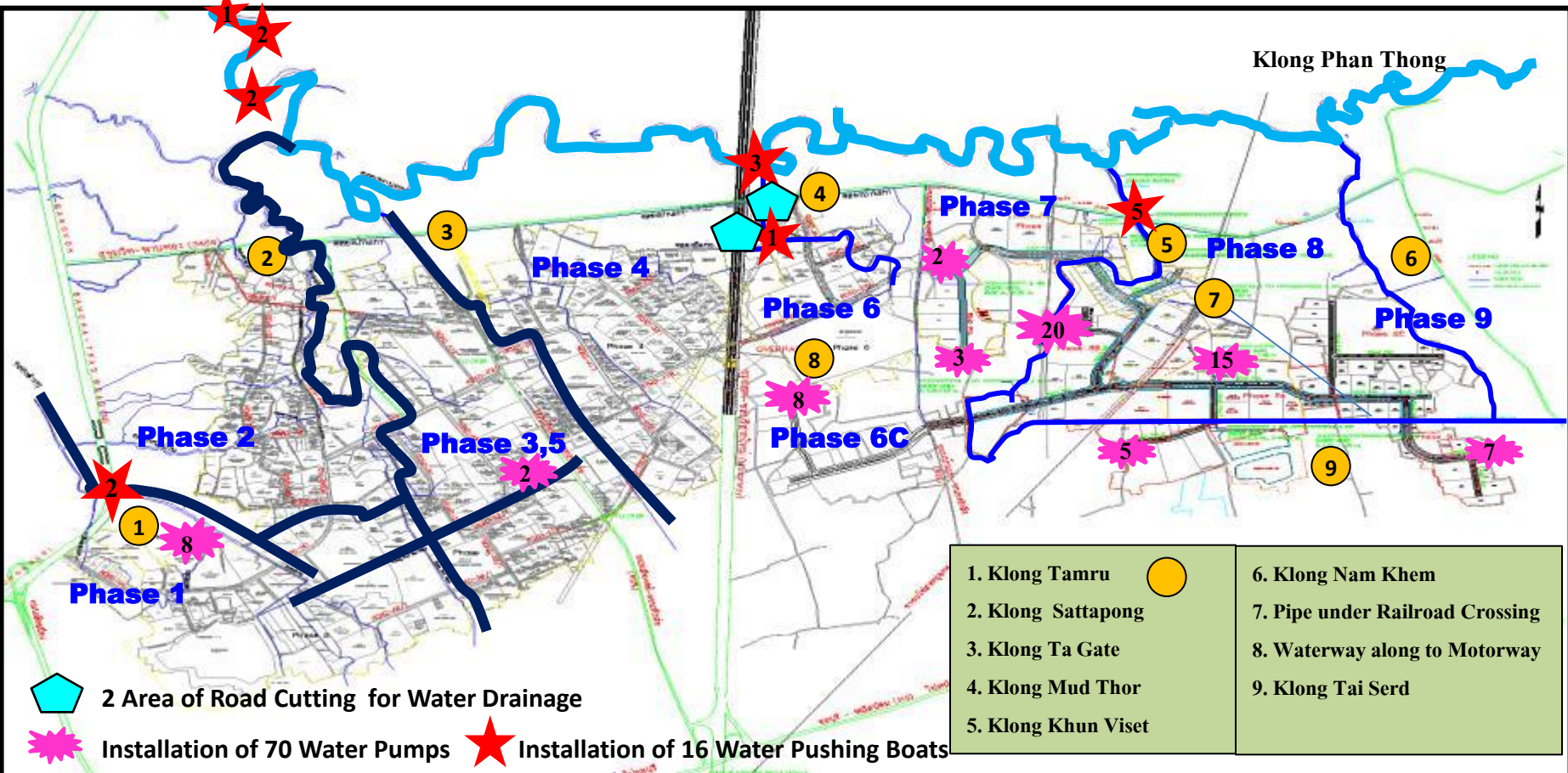
At Entrance to Phase 9  
Water Level significantly reduced and  
almost returned to be normal.  
Open traffic left way (main way)



## Operating Measures by AMATA

- Installed 70 water pumps with capacity at 70,000 cubic meter/hour
- Installed 25 water pushing machines/boats in Klong Mud Thor, Klong Khun Viset and Klong Phan Thong
- Installed 11 water pumps at Phan Thong Water Gate
- Improved floodway along Road No. 3466 Bankao - Phan Thong
- Provided more than 30,000 sandbags to customers , and prepared 15,000 spare ones
- Excavated Siam Denso Entrance at Motorway frontage road.
- Installed Water Pushing Machine under the Motorway Bridge

# Installation of Water Pumps, Water Pushing Machines and Road Cutting Area for Water Drainage at AMATA Nakorn



# 70 Water Pumps installed in AMATA Nakorn



**Phase 7**



**Entrance to Phase 7**



**Entrance to Phase 7**



**Soi Oishi**



**Beside NGK**



**In front of Thai Lotte**





**Phase 9**



**Beside MHI-Pornchai**



**Phase 8**



**Phase 6C**



**Crossroad OTA Phase 7**

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# 11 Water Pumps installed at area of Phan Thong Water Gate



## 25 Water Pushing Machines/Boats installed in Klong Khun Viset , Klong Mud Thor, Klong Phan Thong



**Klong Khun Viset**



**Under Motorway Bridge**



**In front of Wat Sri Pracharam –  
Bangpakong Powerplant**



**Klong Mud Thor**



Provided more than 30,000 sandbags to customers and prepared 15,000 spare ones



# Coordinated with Department of Highways to drain water from Road No. 3466 Bankao - Phan Thong



# Excavated Siam Denso Entrance at Motorway frontage road.



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# Installed Water Pushing Machine under the Motorway Bridge



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## Flood Protection Dikes supported by IEAT



### 44 Flood Protection Dikes (Quick Installed)

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## Provincial Police Region 2





# Military Circle 14<sup>th</sup> and Infantry Regiment 21<sup>st</sup>, Royal Guard Unit



**9 GMC Military Trucks**

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**Pictures of CSR Activities for helping flood  
victims of local communities during  
October 2 – 11, 2013  
by AMATA CORPORATION PCL**



# T. NONGKAKHA, A. PANTHONG; Survival Bags 50 Sets



2/10/2013

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# T. MABPONG, A. PANTHONG; Survival Bags 500 Sets



7/10/2013

*Merging innovative technology with environmental sustainability*



# T. NONGTUMLUENG, A. PANTHONG; Survival Bags 200 Sets



8/10/2013

Merging innovative technology with environmental sustainability



# T. KOKKHEENON, A. PANTHONG; Survival Bags 350 Sets



10/10/2013

*Merging innovative technology with environmental sustainability*



# T. KOKKHEENON, A. PANTHONG; Survival Bags 350 Sets



10/10/2013

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# T. NAPRATHAT, A. PANTHONG; Survival Bags 400 Sets



11/10/2013

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# T. NAPRADU, A. PANTHONG; Survival Bags 500 Sets



12/10/2013

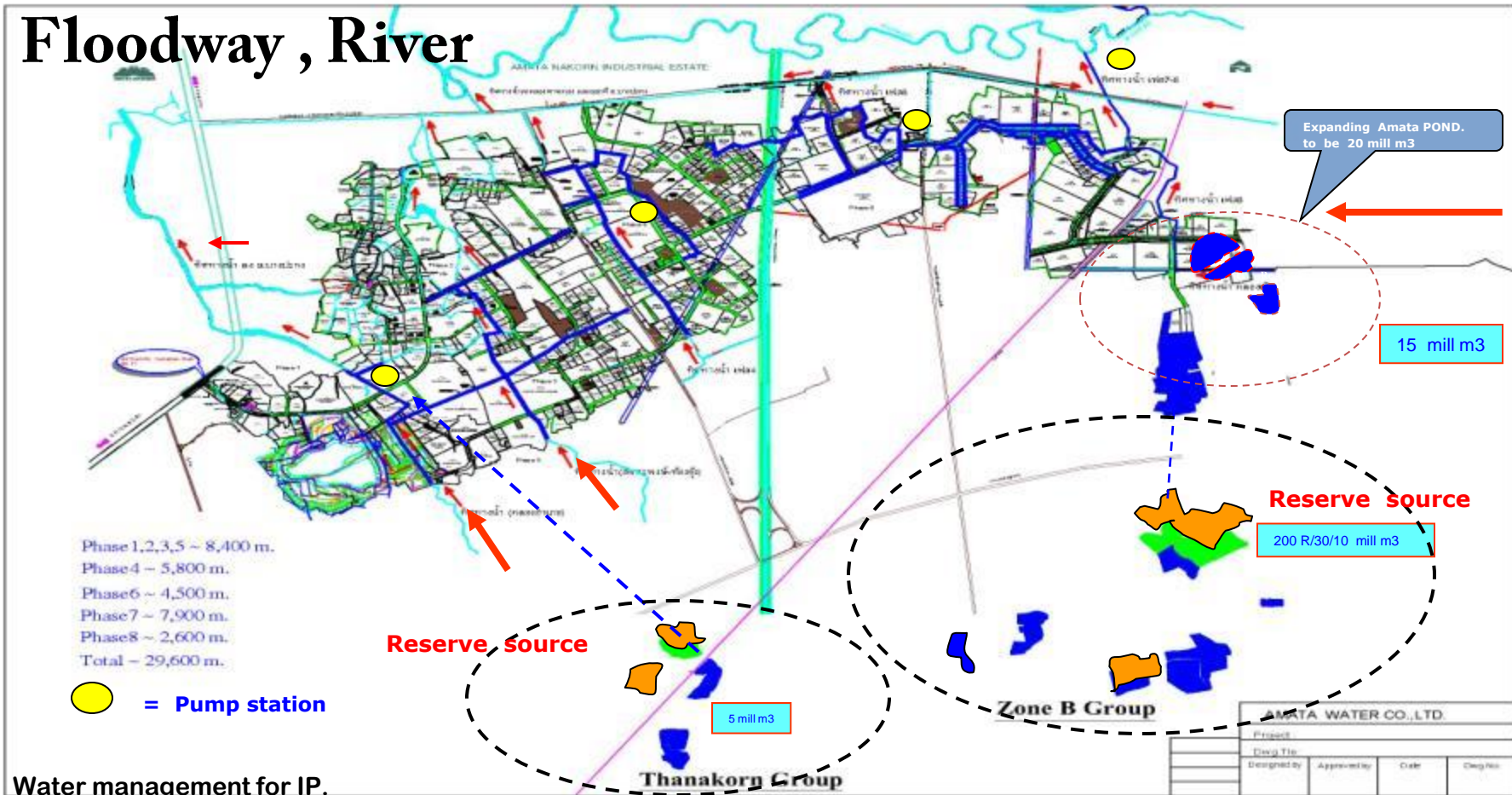
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## 6. Measures to cope with flood management by AMATA Nakorn

Measures	Emergency Situation
1. Reinforce & Increase Height of dikes	1. Plus 24 hours Surveillance Guards
2. Install more permanent numbers of water pumps and water pushing machines/boats ready or water drainage	2. Install water pumps at Phan Thong Water Gate
3. Improve drainage capacity system (both inside and outside AMATA Nakorn )	3. Prepare sandbags , flood protection dikes , big bags to serve emergency cases
4. Closely Coordinate with related government sectors	
5. Increase Reservoir Capacity	

# Floodway , River





Total Current Capacity of AMATA Reservoirs = 15 million cubic meters





## Increase Capacity of AMATA Reservoirs

# Surveillance Area

## One Main Surveillance Area

Klong Phan Thong Water Gate

## Seven Minor Surveillance Areas

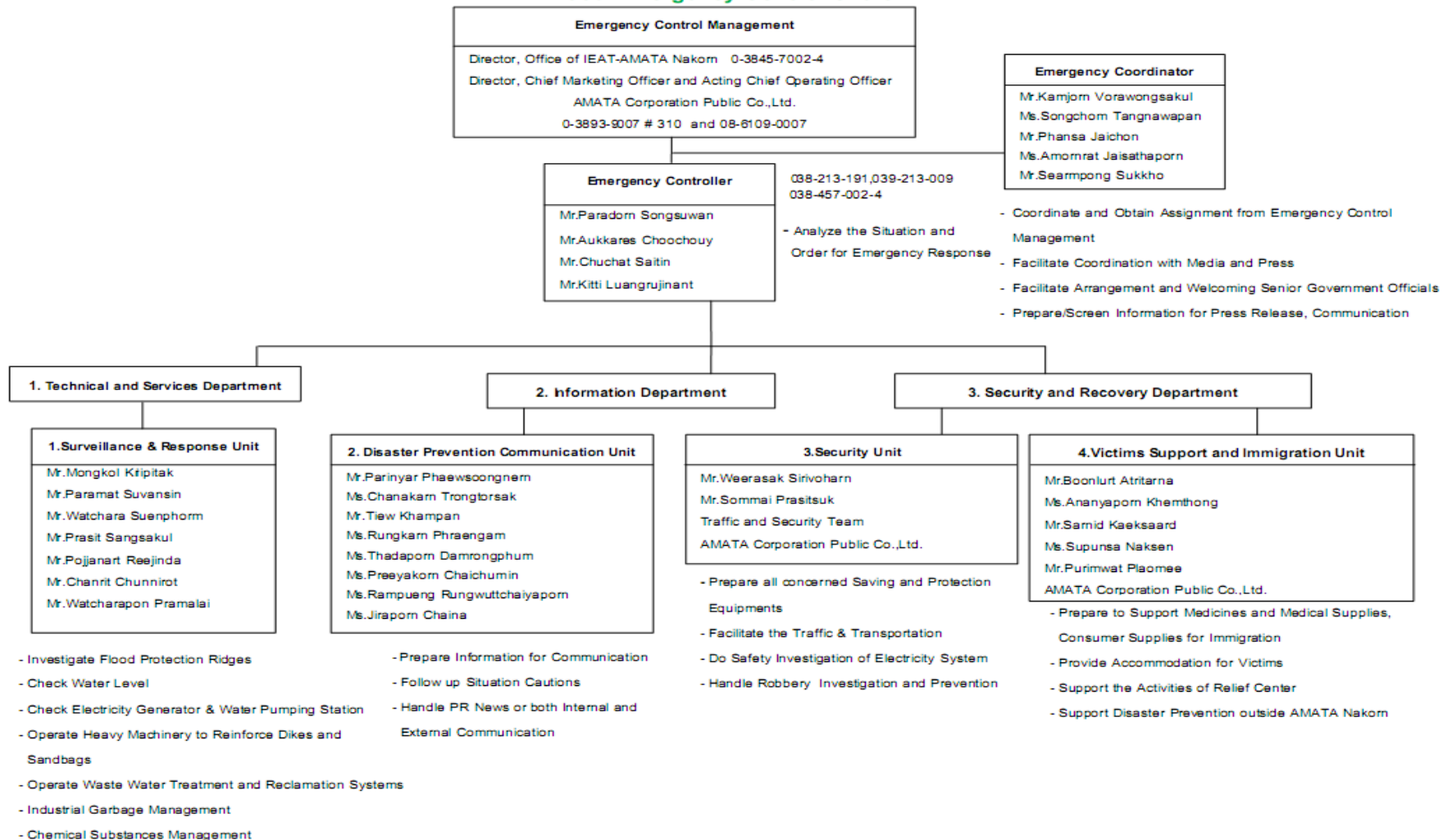
Five Areas inside AMATA Nakorn

- 1<sup>st</sup> Surveillance Area In front of AMATA Nakorn Industrial Estate
- 2<sup>nd</sup> Surveillance Area At area of central canal in front of DENSO (Thailand) Co.,Ltd.
- 3<sup>rd</sup> Surveillance Area Klong Serd at Phase 8 area
- 4<sup>th</sup> Surveillance Area The entrance to Phase 9
- 5<sup>th</sup> Surveillance Area Canal in front of Phase 6C

Two Areas outside AMATA Nakorn

- 1<sup>st</sup> Surveillance Area Panasnikhom District Area
- 2<sup>nd</sup> Surveillance Area Phan Thong District Area

# Flood Emergency Control Chart





E-Mail : [thadaporn@amata.com](mailto:thadaporn@amata.com)

E-Mail : [callcenter@amata.com](mailto:callcenter@amata.com)