# Sewage Treatment Plant (B–1) for Sejong-city

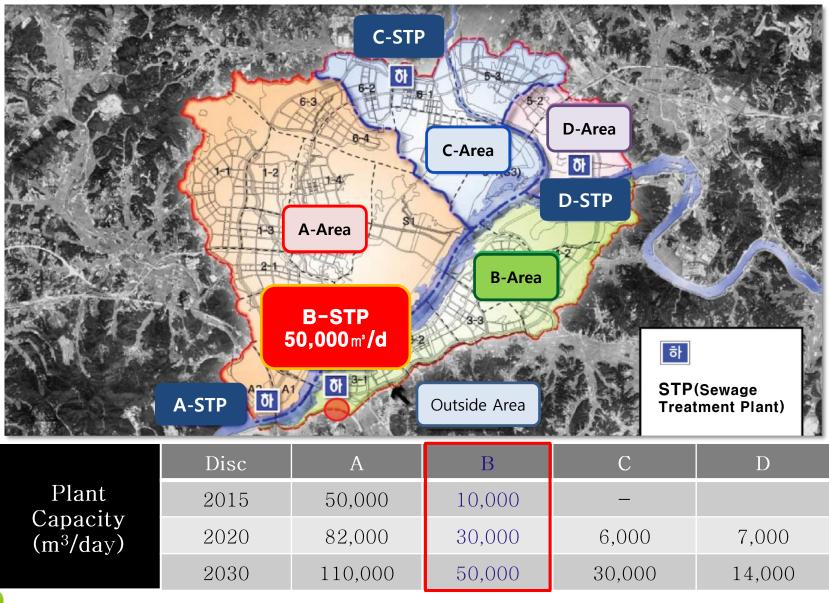


## Contents

- 1. Sewage Treatment covering area
- 2. Location
- **3. Project Overview**
- 4. KIMAS-MBR Process
- **5. Deodorizing Process**
- 6. Guaranty & Treated Water quality
- 7. Landscape Planning

## 1. Sewage Treatment covering area Sewage 1

#### Sewage Treatment Plant (B-1)



KOREA LAND & HOUSING CORPORATION

LH



#### Sewage Treatment Plant (B-1)



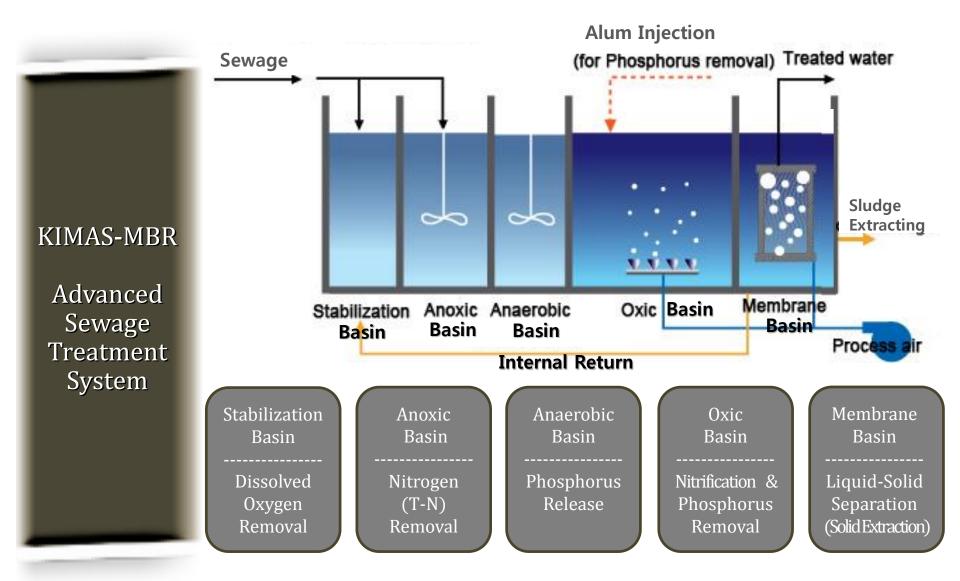
Sewage Treatment Covering Area : 19.06km<sup>2</sup> (Number of household : About 30,000)

KOREA LAND & HOUSING CORPORATION

## **3. Project Overview**

| Project Name           | Sewage Treatment Plant (B-1) for Sejong-City   |  |  |  |  |
|------------------------|--|--|--|--|--|
| Capacity               | 30,000 m <sup>3</sup> / day (water treatment area 19.06km <sup>3</sup> )   |  |  |  |  |
| Contract Amount        | 35,000,000 USD   |  |  |  |  |
| Contractor             | Kolon Global Corporation   |  |  |  |  |
| Construction<br>Period | June, 1, 2013 ~ October, 31, 2016, Now under commercial operation (July, 2017)   |  |  |  |  |
| Process                | KIMAS (Biologycal Treatment With Membrane)<br>+ IPR (Phosphorus Removal Process) + Ozonization Process   |  |  |  |  |
| Public Orderer         | Korea Land & Housing Corporation   |  |  |  |  |
| Project<br>progress    | <ul> <li>May, 2013 Contract</li> <li>December, 2014 Civil work completion</li> <li>June, 2015 Mechanical completion</li> <li>January, 2016 Test run &amp; Commissioning (30,000 ton/day)</li> <li>July, 2017 Under commercial Operation</li> </ul> |  |  |  |  |
| KOREA LAND & H         | IOUSING CORPORATION <b>CORP</b>  |  |  |  |  |

## 4. KIMAS-MBR(Membrane) Process Sewage Treatment Plant (B-1)



KOREA LAND & HOUSING CORPORATION

**First Step Second Step Third Step** Low concentration odor Plasma Sulfuric acid(H<sub>2</sub>SO<sub>4</sub>) & Sodium hydroxide(NaOH) Spray High concentration odor Sodium Hypochlorite **BIO FILTER** (NaOCl) Scrubbing

KOREA LAND & HOUSING CORPORATION

#### **KOLON GLOBAL CORP.**

#### Sewage Treatment Plant (B-1)

## 5. Deodorizing Process

6. Guarantee & Treated Water quality Sewage Treatment Plant (B-1)

#### Water Quality Control

(Unit:mg/l)

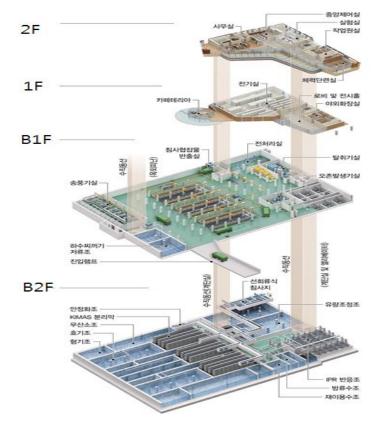
| Item      | Inlet<br>Sewage | Guarantee<br>(Legal Limit) | Current<br>Treated Water | Removal<br>Efficiency (%) |
|-----------|-----------------|----------------------------|--------------------------|---------------------------|
| BOD(mg/L) | 208             | Less than 3                | 0.7                      | 99.6                      |
| COD(mg/L) | 74.0            | Less than 15               | 6.0                      | 91.8                      |
| SS(mg/L)  | 134.0           | Less than 3                | 0.2                      | 99.8                      |
| T-N(mg/L) | 45.0            | Less than 10               | 2.65                     | 94.1                      |
| T-P(mg/L) | 5.35            | Less than 0.2              | 0.1                      | 98.1                      |



## 7. Landscpae Planning

#### Sewage Treatment Plant (B-1)





The Sewage Treatment Plant is constructed completely underground to Prevent noise and odor troubles.



