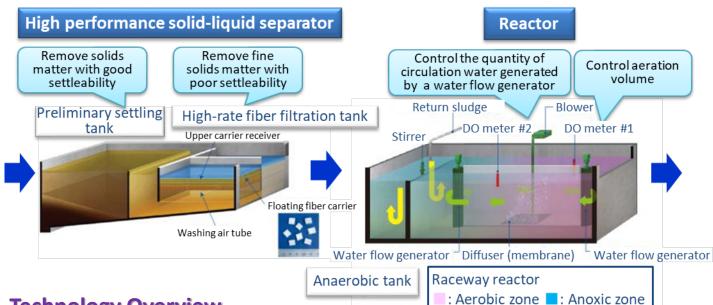
## Demonstration on Energy-saving Wastewater Treatment System Using Highly Efficient Solid-liquid Separation Technology and Dual Dissolved Oxygen Control Technology

Implementer: The consortium of Maezawa Industries, Inc., ISHIGAKI COMPANY, LTD., JS and Saitama Prefecture

Retrofit of CAS with energy-saving nutrients removal achieved without expansion



## **Technology Overview**

- High performance solid-liquid separator installed in the primary settling tank
  - ➤ Significant SS removal
  - Reduction of aeration volume and retention time for a reactor
- Dual DO control of a raceway reactor
  - ➤ High nitrogen removal by forming stable aerobic and anoxic zones



No additional reactor is required at retrofit into nutrients removal

## **Achievements**

- Treatment performance: satisfy the prescribed effluent water quality: BOD: **15mg/L** or less, T-N: **10mg/L** or less, T-P: 3mg/L or less
- Compared to retrofitting into nutrients removal (A<sub>2</sub>O process),
  - Reduce construction costs by 18%,
  - > Reduce O&M costs by 16%,
  - Reduce energy consumption by 40%