

Disclosure of Detailed Risk Assessment Results for Priority Locations (Satsuma Plant)

1. Overview of the Satsuma Plant

The Satsuma Plant of SparkTec WKS CO., LTD. (Satsuma-cho, Kagoshima Prefecture) manufactures spark plugs, a flagship product of Our Group that is indispensable for automotive engines. We operate an integrated production line that covers everything from the manufacturing of ceramic insulators and metal shells to final assembly. Furthermore, as a plant deeply rooted in the local community, we support regional employment and place great value on our connection with local society. This includes fostering a vibrant working environment where every individual employee can thrive.

2. Detailed Risk Assessment

Based on a simplified analysis of the area surrounding the Satsuma Plant using global tools, we identified it as a "Sensitive Location" due to high-risk scores in the importance of biodiversity, ecosystem integrity, and flood risk. In this document, along with conducting field surveys, we have performed a detailed assessment of the Satsuma Plant's dependencies, impacts, and risks related to nature.

Table: Evaluation Results of the Satsuma Plant

Four Perspectives	Indicator	External Database Used	Score	Result
Importance of Biodiversity	(1) Overlap with Protected Areas (WDPA)	IBAT (Integrated Biodiversity Assessment Tool)	1	No proximity
	(2) Overlap with Key Biodiversity Areas (KBA)			
	Distribution of Threatened and Endemic Species (STAR Index)	IBAT	3	—
Ecosystem Integrity	BII Biodiversity Intactness Index	Newbold et al. (2016)	4	0.96
	TCL Tree Cover Loss	Global Forest Watch	1	2%
Importance of Ecosystem Service Provision	Proximity to Areas Claimed by Indigenous Peoples and Local Communities	LandMark	1	No proximity

Physical Water Risk	Baseline Water Stress	WRI Aqueduct	1	Low (<10)
	Surface Water Quality Index	WRF (WWF)	1	—
	Flood Risk	Flood Risk Finder (MS&AD)	4	1.47m

Evaluation Items

[Dependency and Impact] Use of Water Resources

[Impact] Water Pollution (Impact on the Ecosystem of the Receiving River)

[Risk] Impact of Plant Operations on Threatened Species

[Risk] Flood Risk

3. Use of Water Resources

1) Current Status of the Satsuma Plant

Our plant requires a significant volume of water resources in its manufacturing processes, and we utilize local groundwater for the majority of the water resources necessary for operations.

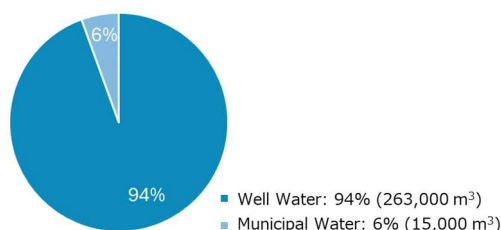


Figure 1: Proportion of Water Withdrawal by Source (FY2024)

2) Risk Assessment

We conducted an on-site interview survey with the Water Supply Division of Satsuma-cho. Through this, we reconfirmed that there are no agreements or official pacts regarding water withdrawal restrictions with the town. We also verified that the "Water Source Protection Zones" designated by the town are not located near the plant. Based on this hearing with the Satsuma-cho Water Supply Division and our verification of the surrounding environment, we confirm that the plant's current groundwater use has a limited impact on local domestic water supplies and the water supply of other sectors.

3) Future Actions

To ensure efficient water use in our manufacturing processes, the Satsuma Plant continuously implements water-saving activities for each piece of equipment. In addition, we have

established a management system to optimize water intensity in accordance with production volumes.

4. Water Pollution (Impacts on the Ecosystem of the Receiving River)

1) Current Status of the Satsuma Plant

At the Satsuma Plant, we treat wastewater from manufacturing processes (such as the plating process) using our wastewater treatment facilities before discharging it into the adjacent Ana River. For wastewater treatment, we adopt a "batch discharge system" where treated water is temporarily stored, and its water quality (such as pH) is verified before discharge. This system structurally reduces the risk of discharging abnormal water into the river.

We strictly comply with relevant laws, Kagoshima Prefecture ordinances, and the pollution prevention agreement with Satsuma-cho. Furthermore, to achieve further reductions in our environmental footprint, we have independently established our own strict "Voluntary Wastewater Standards" to manage water quality. (See Figures 2–5 and Table below)

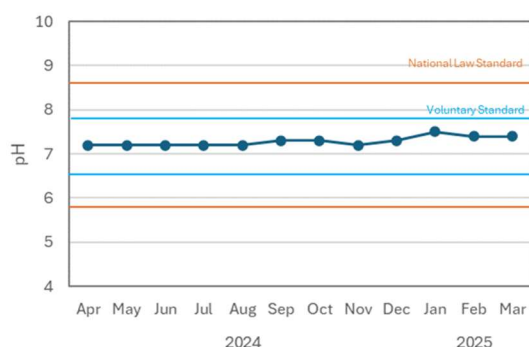


Figure 2: Measured pH Values (FY2024)

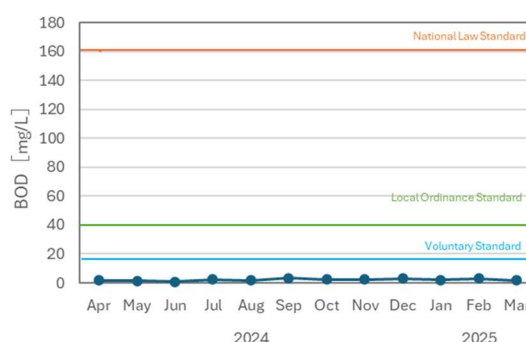


Figure 3: Measured BOD Values (FY2024)

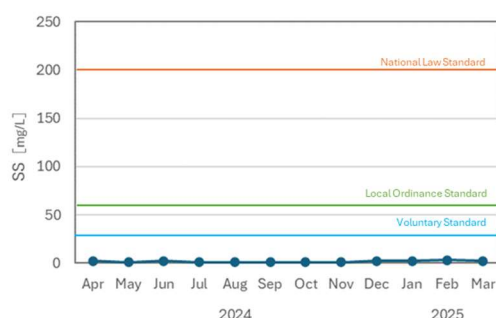


Figure 4: Measured SS Values (FY2024)

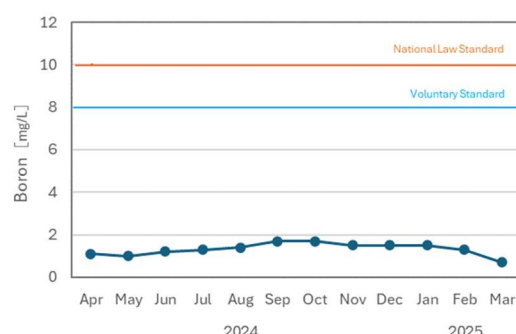


Figure 5: Measured Boron Values (FY2024)

Table: Wastewater Management Standards and Measured Values (FY2024)

*Measured once a year. Other items are measured once a month.

Measurement Item	Unit	Wastewater Standards under the Water Pollution Control Law	Voluntary Wastewater Standards	Measured Values	
				Average	MAX
P H	—	5.8~8.6	6.5~7.8	7.28	7.5
B O D	mg/L	160	16	2.15	3.2
S S	mg/L	200	28	1.58	3
n-Hex	mg/L	5	4	<0.5	0
Boron	mg/L	10.0	8.0	1.33	1.7
Number of Coliform Bacteria	pieces/cm ³	3000	2400	Not Detected	0
Ammonia, Nitrite Compounds	mg/L	100	100	11.20	16
COD	mg/L	160	128	5.50	8
Cyanide (*)	mg/L	1	0.8	<0.05	—
Zinc	mg/L	2	1.5	0.26	0.53
Hexavalent Chromium (*)	mg/L	0.5	0.4	<0.02	—
Fluorine (*)	mg/L	8	6.4	<0.2	—
Copper (*)	3mg/L	3	2.5	<0.01	—
Lead (*)	mg/L	0.1	0.09	<0.01	—
Chromium	mg/L	2	1.6	<0.01	—
Arsenic and its Compounds (*)	mg/L	0.1	0.08	<0.01	—
Total Mercury (T-Hg) (*)	mg/L	0.005	0.004	<0.0005	—
Cadmium and its Compounds (*)	mg/L	0.03	0.024	<0.003	—

2) Risk Assessment

To confirm the impact of treated water discharge on the Ana River and its surrounding ecosystem, we commissioned experts to conduct a field survey in the Ana River immediately downstream of the discharge point and around its confluence with the Sendai River. As a result, we confirmed the presence of a rich avifauna consisting of 36 species belonging to 23 families across 10 orders.

- **Presence of Environmental Indicator Species:** We confirmed the habitat of the Crested Kingfisher (*Yamasemi*), which serves as an indicator of a healthy river environment (excellent water quality, abundant aquatic life and fish).
- **Presence of Apex Predators:** We observed the Osprey (*Misago*), listed as Near Threatened in the Ministry of the Environment and Prefectural Red Lists, engaging in foraging flights and predatory behavior above the confluence.

Furthermore, through literature reviews, we found that habitats for *Kawayanosho* (Freshwater Algae / Podostemaceae—*Hydrobryum japonicum*), a natural monument designated by

Kagoshima Prefecture, are scattered throughout the Ana and Sendai Rivers. We conducted an interview survey with the Satsuma-cho Board of Education, which installed a monument at the "Kawayanosho Habitat" near the plant. They provided the view that "the plant's wastewater satisfies the standard values by a wide margin, and under current operations that do not physically alter the riverbed environment through development projects, no new additional measures or considerations for the preservation of the natural monument (*Kawayanosho*) are required." Based on these survey results, we assess that our current wastewater discharge has a limited impact on the river ecosystem of public water bodies.

3) Future Actions

We will continue to maintain our strict voluntary wastewater standards and ensure the proper operation and water quality management of our wastewater treatment facilities, thereby striving to preserve the rich surrounding river ecosystem.

5. Impact of Plant Operations on Threatened Species

1) Current Status of the Satsuma Plant

We operate a rigorous management system based on laws and voluntary standards for wastewater, chemical substances, waste, and noise, striving to reduce the environmental footprint on the area surrounding the plant. Furthermore, in managing the green spaces on our premises, we place a strong emphasis on biodiversity conservation. This includes pesticide-free management, weeding using goats, and selecting plant species with consideration for pollinators.



Weeding by Goats

2) Risk Assessment

Following the identification of a score of 3 (requiring attention) for the STAR index (Species Threat Abatement and Restoration metric) around the Satsuma Plant, we conducted a factual survey of flora and fauna within the plant premises and the surrounding river ecosystem. We evaluated risks by verifying proximity to legally designated areas and identifying important natural assets in the wider surrounding region (within a 10–30 km radius).

- Proximity to Legally Designated Areas: The area surrounding the Satsuma Plant possesses an extremely vital environment for biodiversity, being located close to the Sendai River Basin Prefectural Natural Park and the Imuta-ike Prefectural Natural Park designated under the Natural Parks Act. As indicated in the evaluation of wastewater, we assess that our current impact on nature is limited.
- Important Natural Assets in the Wider Surrounding Region (10–30 km Radius): There are internationally and nationally protected wetlands and green spaces. Important natural assets such as the wintering grounds of cranes in Izumi City and Imuta-ike Pond are located in a wide area 10–30 km away from the plant premises. Therefore, we assess that they are outside the scope of direct physical impact from our plant operations.
- *Wintering Grounds of Cranes in Izumi City*: One of the world's premier habitats where over 10,000 cranes migrate annually; designated as a National Natural Monument and registered as a Ramsar site.
- *Imuta-ike Pond*: A National Natural Monument and Ramsar site, designated as a habitat protection area for the Libellulid dragonfly (*Bekkotombo* / *Libellula angelina*), a domestic endangered species under the Act on Conservation of Endangered Species of Wild Fauna and Flora.

In addition, a flora and fauna survey conducted by experts on the plant premises confirmed the growth of rare plant species such as *Itotorigemo* (*Najas gracillima*), *Marubateishousou* (*Leibnitzia anamala*), and *Kojikiichigo* (*Rubus sumatranus*). We objectively evaluate that our unique green space management method, which avoids the use of pesticides, contributes to maintaining and protecting the growth environment of these rare species (mitigating impacts).

3) Future Actions

For the rare plant species confirmed on the premises during this survey, we have shared specific growth area data with the departments responsible for green space maintenance and facility management within the plant. When carrying out future onsite maintenance, we will continuously implement measures based on expert advice, such as zoning areas and performing "high-cutting" (mowing weeds at a higher level) to avoid disturbing the growth environment of these rare species.

6. Flood Risk

1) Current Status of the Satsuma Plant

Our plant is located near the Ana River, a tributary of the Sendai River system. Within the plant premises, we appropriately arrange and maintain drainage infrastructure, such as rainwater drainage channels and perimeter ditches, to prepare for localized heavy rains from torrential downpours and typhoons, striving for planned drainage outside the premises. We also conduct regular inspections and cleaning of drainage facilities to maintain their full capacity.

Furthermore, to ensure we can promptly establish an alert status in response to regional weather warnings and river flood danger information, we maintain constant preparedness against water disasters from both structural and non-structural perspectives. This includes formulating our own disaster prevention manual and preparing internal communication systems. In addition, we utilize branches and leaves from trees pruned during onsite maintenance as water flow regulation materials ("wooden dams") in valley terrains, achieving both resource circulation and disaster prevention measures.



Wooden Dams

2) Risk Assessment

In the simplified evaluation using a global risk analysis tool (Flood Risk Finder), the flood inundation depth around the Satsuma Plant area was predicted to be 1.47 m (risk score: 4), leading to its extraction as a location requiring attention. In response, we conducted a factual survey and detailed assessment using the Geospatial Information Authority of Japan (GSI)'s "Current Hazard Map" and other resources.

The survey revealed that while flooding is expected in some areas around the Ana River, the entire premises of Our plant are located on higher ground than the surroundings.

Furthermore, the expected impact of inundation on some roads around the plant is temporary

and limited. Based on these physical facts, we evaluate that the risk level of flooding directly causing significant disruption to the continuity of our plant operations is currently kept low.

(Source)GSI Hazard Map: <https://disaportal.gsi.go.jp/maps>

3) Future Actions

Based on the results of this detailed evaluation, we will further strengthen our organizational resilience (response capacity) against unexpected heavy rain disasters through the continuous implementation of regular disaster drills and ongoing reviews of our BCP (Business Continuity Plan).

*The interview surveys with the Satsuma-cho Water Supply Division and Board of Education, as well as the field ecosystem surveys by experts mentioned on this page, are all based on actual results and data conducted in FY2025 (June 2025 to January 2026). We regularly review these risk assessments and update the information to reflect changes in the surrounding environment.

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