JFM Green Bond Impact Report 2024



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About This Report

Japan Finance Organization for Municipalities (JFM) provides loans to projects operated by local governments. As of 31 March 2024, total outstanding loans stood at JPY 23.0tn, of which JPY 6.4tn was for sewerage, accounting for 27.9% of the total amount.

JFM issued its fifth green bond in January 2024 to finance the Japanese local governments' sewerage projects and fully allocated the net proceeds by 28 March 2024 after issuance. Sustainability Working Group established under JFM Sustainability Committee chaired by President and CEO conducted a survey to 74 local governments where loans were made between 29 January 2024 and 28 March 2024 and of which the loan amount for the project was JPY 300mm or higher in principle and obtained effective response from 70 local governments (Total loan amount: approx. JPY 111.8bn, effective response rate: 95%).

In this report, JFM put together an overview of each sewerage project which JFM financed and its environmental impacts including impact indicators based on the response in the survey. The objective of this report is to actively disclose to investors the Japanese local governments' efforts on SDGs and the environmental impact of each project.

Amount of electricity saved (kWh)

> Population of the treated area (thousand)

mm



The amount and number of JFM loans made for sewerage projects



Executive Summary

- JFM provides loans to local governments on SDGs-related projects. Sewerage projects take up a large portion of JFM's total lending, which reaches about JPY 300 ~ 400bn annually.
- On the back of the growing global concerns on SDGs, JFM issued EUR 500mm (approx. JPY 79.7bn) green bond in January 2024, in order to promote actively the Japanese local governments' efforts on SDGs and to secure stable provision of long-term funding at low interest rates.
- JFM's green bond has received a second-party opinion from Moody's and has attained an SQS2 sustainability quality score (very good).

Summary of Terms - Green Bond

Bond Ratings	A1 / A+ (Moody's / S&P)
Tenor	5 year
Issue Amount	EUR 500 million
Pricing Date	16 January 2024
Issue Date	23 January 2024
Maturity Date	23 January 2029
Coupon	2.875%
Second-party Opinion Provider	Moody's
Sustainability Quality Score	SQS2 (Very good)

The breakdown of loans to sewerage projects (excluding refinancing) provided by JFM is as follows:



%1 Breakdown of green bond eligible projects from 29 January 2024 to 28 March 2024 (approx. JPY 111.8bn)
 %2 Breakdown of loans for sewerage projects in FY2023

3 Does not add up to 100 due to rounding off

 JFM has conducted surveys to relevant local government borrowers in order to measure the environmental impacts of their sewerage projects. Loans from 29 January to 28 March 2024 were targeted for the survey, and the refinancing rate for sewerage projects was 0%. In addition, the following effects were observed:

Summary of Survey Results

Total extension of newly	Covered area	Water management	Amount of
constructed pipes (km)	Population (persons)	Capacity (mੈ)	electricity saved (kWh)
603.5	21,314,872	3,316,519,888	18,108,765

% The number of the survey sample for local governments was 74, and 70 returned effective response (95%) <u>% Summary of Methodology</u>

1) Total extension of pipes is addition of newly constructed pipes distance.

 Covered area population is calculated by totaling the population (actual, planned, or estimated values) of the covered areas after new construction or renewal/reconstruction of sewage treatment facilities, etc.

 Water management capacity is calculated by totaling the annual volume (actual, planned, or estimated values) of treated water after new construction or renewal/reconstruction of sewage treatment facilities, etc.

4) Amount of electricity saved is calculated by totaling the reduction amount (actual, planned, or estimated values) in annual electricity consumption before and after new construction or renewal/reconstruction of sewage treatment facilities, etc.

JFM and Sewerage

JFM was established as a joint funding organization wholly owned by all Japanese local governments and has provided long-term and low-interest- rate loans to local governments. JFM has supported local governments' finance in the capital markets and has contributed to their sound financial management and promoted the welfare of their residents.

Local governments, amidst a decrease in population, are facing various administrative demand, such as the revitalization of regions, measures against the declining birth rate and an aging population, deteriorating infrastructure, measures against large-scale and intensifying natural disasters

To address these challenges, JFM has provided loans to local governments who develop infrastructure and administrative services to their residents and has contributed to sustainable development of the community and environment. Japan Finance Organization for Municipalities President and CEO NAITO Hisashi



Sewerage, which covers the largest portion of JFM's loan portfolio, is managed by local governments and the quality of water is regulated under the laws of Japan. Sewerage plays an important role and contributes to the improvement of living conditions, prevention of floods and preservation of water quality through wastewater treatment and rain water drainage. The national government and the local governments have worked together to create a sustainable sewerage system such as measures against aging facilities and minimizing the effect of national disasters.

JFM contributes to a sustainable development of the sewerage system and regional development by providing loans to local governments.

The Japanese government has set specific targets on sewerage business based on the Paris Agreement, by setting environmental measures such as sludge recycle rate. Moreover, in accordance with the Act on Promoting of Global Warming Countermeasures and its related policies, Japan has set a policy goal of achieving the utilization rate of sewage sludge as energy such as biomass power generation.

JFM SDGs Related Lending Operations



JFM Green Bond Framework

Approach to Sustainability

- Local Governance in Japan and JFM's contribution
 - * SDGs Mapping-Fund Usage by JFM, 29.2% (As of 31 March 2022) are financed for Sewerage projects
- Development of Sewerage System in Japan
 - * Sewerage business is operated by municipalities and quality of water is regulated under laws of Japan
- Further initiatives and towards achievement of SDGs

Rationale for Issuance

- Sewerage industry can contribute to a sustainable economy and public health
- JFM hopes to broaden its investor base by attracting green bond investors

Eligibility Criteria

 Eligibility Criteria for JFM green bond is as set forth on the table below

GBP Eligible Green Project Category	Eligibility Criteria	Environmental Objective	Alignment with UN SDGs
Sustainable water and wastewater management	 Development, construction, maintenance, updates, operation of sewerage related assets, which comply with sewage drainage standards set by Japanese law including: Sewerage Management-Related Facilities Facility/Equipment Pipes 	Pollution Prevention and Control Water Resource Conservation Energy use of sewage sludge, sewage sludge recycle	3 COURSE IN CONSISTENT OF MERSON OF AN ADDRESS OF AN ADDRESS OF AD

Alignment with the Green Bond Principles, 2021(ICMA GBP)

JFM's Green Bond Framework is aligned with four core components of the GBP

1 Use of Proceeds

An amount equal to the net proceeds will be allocated to the Eligible Green Projects set forth below

2 Process for Project Evaluation and Selection

- JFM Loan Department will confirm that the borrower has obtained consent or approval on the borrowing from relevant authorities
- Green Bond Working Group will conduct a survey to municipalities to determine the effective portfolio

3 Management of Proceeds

 JFM's Green Bond Working Group will track, monitor and account for the allocation of the proceeds

4 Reporting

- JFM Green Bond Working Group will conduct a survey of municipal borrowers with respect to the environmental impacts of sewerage projects
- JFM Green Bond Working Group will then report the effective portfolio for the allocation which only includes projects that borrowers return effective response
- JFM will publish the following impact report on website annually
 - Amount of net proceeds of the Notes allocated
 - Breakdown of Effective Portfolio
 - Expected or estimated KPIs
 - Case studies of JFM's lending to sewerage projects
 - Refinancing rate

(i) Amount of Loan to Sewerage Projects

	Prefectures	Government -designated Cities	Cities	Towns and Villages	Others	Total	Number of Local Governments by Borrower Type
Number of Local Governments	6	6	460	286	6	764	Others Prefectures 0 Government- 1% designated
Number of Loans	8	14	1,885	785	16	2,708	6 1% 6 1%
Loan Amount (JPY million)	878.1	10,203.8	229,681.6	24,065.1	1,901.4	266,730.0	Towns and Villages
			37% Cities				
	JPY 2bn or over	JPY 1bn or over	JPY 500mm or over	JPY 100mm or over	Below JPY 100mm	Total	460 60%
Number of Loans by Loan Amount	6	28	84	489	2,101	2,708	
							Loan Amount by Borrower Type

- The total loan amount to sewerage projects for FY2023 (1 April 2023 to 31 March 2024) (excluding refinancing) was JPY 266.7bn.
- The number of local governments was 764, and the number of loans was 2,708. In terms of the loan amount by types of borrowers, cities were the highest with 86%, followed by towns and villages with 9%, then government-designated cities with 4%.
- In terms of the number of loans by loan amount, JPY 2bn or over was 6, JPY 1bn or over was 28, JPY 500mm or over was 84, JPY 100mm or over was 489 and below JPY 100mm was 2,101.



※ Does not add up to 100 due to rounding off

(ii) Breakdown of Green Bond Effective Portfolio

	Sewage Treatment Plant	Advanced Treatment Plant	Sludge Treatment Plant	Pump Station	Pipes	Others	Total
Number of Projects by Type	56	1	16	52	114	53	292
Loan Amount by Type (JPY million)	12,587.7	297.2	4,420.3	9,986.5	67,471.6	17,073.9	111,837.2

	New	Renewal	Total		
Number of Projects by Type	115	177	292		
Loan Amount by Type (JPY million)	63,969.9	47,867.3	111,837.2		

- JFM Sustainability Working Group has selected 74 local governments which JFM financed for eligible sewerage projects between 29 January 2024 and 28 March 2024 with the loan amount over JPY 300mm in principle and conducted a survey for the purpose of this green bond reporting. The working group obtained effective response from 70 local governments (effective response rate: 95%) (a total of approx. JPY 111.8 bn in loan amount).
- The table above shows the survey results from relevant local governments.
- Regarding the types of projects by loan amount eligible for green bond, pipes cover the largest portion with 60%, followed by sewage treatment plants with 11%, and then pump stations with 9%.
- Additionally, 57% of the loan amount eligible for green bond was financed to new facilities and 43% was for renewal.



Sewage Treatment Plant (New)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Covered Area Population (persons)	Annual Water Management Capacity (㎡)	Water Quality (BOD) (After treatment, Year/Period Average) (mg/L)	Water Quality (Phosphorus) (After treatment, Year/Period Average) (mg/L)	Other positive environmental impact
Kitakami City	lwate	Expansion of Kitakami industrial complex sewage treatment plant	2,650,732	1,230,800	46.43	64,389	2,118,643	4.0	N/A	 Increase in the amount of industrial drainage treated to accommodate an increasing number of companies operating in Kitakami Industrial Park as the Park expands
Akita City	Akita	Installation of septic tanks	4,488	3,300	73.53	9	720	N/A	N/A	 Preservation of water quality, improvement of living environment, and reductions of offensive odors produced in the process of pumping wastewater by installing Municipally installed septic tank
Utsunomiya City	Tochigi	Construction of new sewerage facilities	20,399	9,000	44.12	470,203	95,640,745	0.8	1.2	 Sludge recycling rate 100% (delivery to recycling plants, composting companies, and cement companies)
Mibu Town	Tochigi	Construction of new sewage treatment facilities (for agricultural community drainage)	282,000	126,900	45.00	443	2,920	N/A	N/A	N/A
Toyama City	Toyama	Installation of watt-hour meters at water treatment facilities at Hamakurosaki Purification Center, etc.	3,190	1,435	44.98	378,379	56,780,421	N/A	N/A	 A power generation project under a PFI scheme utilizing digestion gas generated in the sewage treatment process
Nagano City	Nagano	Installation of septic tanks as part of a designated regional domestic drainage treatment project	13,139	8,600	65.45	2,307	141,159	N/A	N/A	 Increased percentage of households using flush toilets
Yao City	Osaka	Construction of new treatment plant facilities as part of Osaka prefecture basin sewerage project	9,592	7,700	80.28	N/A	N/A	N/A	N/A	N/A
Hatsukaichi City	Hiroshima	Expansion of water treatment facilities at Yuwa Purification Center	105,300	23,000	21.84	75,854	8,359,548	3.1	1.3	 Dealing with treated water volume increased in line with the expanding sewage treatment areas
Iwakuni City	Yamaguchi	Installation of septic tanks as part of a designated regional domestic drainage treatment project	883	400	45.30	1,009	89,791	N/A	N/A	N/A
Marugame City	Kagawa	Construction of a new purification center to address the aging issues and seismic vulnerability of the existing purification center	1,565,710	620,160	39.61	48,306	9,059,640	3.9	0.6	 Annual total electricity consumption reduced: 33,472kWh Reduction in GHG emissions by effective on-site use of treated water, reductions in the scale of new facilities, and the use of energy-saving equipment
Imabari City	Ehime	Expansion of treatment plant facilities required for sewerage construction in Onishi District	435,700	178,830	41.04	4,873	450,736	2.4	1.5	N/A
Nagasaki City	Nagasaki	Mechanical and electrical work for Series 9 water treatment and deodorization facilities at Seibu Sewage Treatment Plant, etc.	705,471	369,037	52.31	371,559	43,685,876	N/A	N/A	 Sludge recycling (recycled fertilizer (compost fertilizer)) Reduction of power consumption by installing eco-friendly equipment
Total Am	ount of Sewao	e Treatment Plant (New) (12 projects)	5 796 604	2 579 162						

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Covered Area Population (persons)	Annual Water Management Capacity (㎡)	Water Quality (BOD) (After treatment, Year/Period Average) (mg/L)	Water Quality (Phosphorus) (After treatment, Year/Period Average) (mg/L)	Other positive environmental impact
Hakodate City	Hokkaido	Construction of reaction tanks (Series 1 No. 3) to renew reaction tank diffusers	293,683	164,500	56.01	117,232	19,171,780	5.5	0.7	 Annual total electricity consumption reduced: 36,260kWh (Estimate)
Ebetsu City	Hokkaido	Renewal of separate sewage inflow controllers, etc.	100,682	32,600	32.38	115,375	16,891,502	9.0	N/A	 Sludge recycling rate 100% (transport and use of sludge as ordinary fertilizer on farmland) Use of sewerage treatment water for snowmelt Use of digestion gas generated in the sewage treatment process as fuel for generators
Aomori City	Aomori	Renovation of aging private power generation facilities	454,234	223,372	49.18	162,280	N/A	15.0	0.9	N/A
Kitakami City	Iwate	Renewal of remote monitoring systems for agricultural community drainage	52,859	31,400	59.40	11,244	1,137,656	N/A	N/A	N/A
Oshu City	Iwate	Renewal of aging electrical and mechanical equipment	227,479	110,500	48.58	12,766	1,124,849	8.0	N/A	N/A
Akita City	Akita	Renewal of private power generation facilities and sewage pumps	75,297	36,160	48.02	781	99,383	N/A	N/A	N/A
Mito City	Ibaraki	Renovation of electrical equipment at treatment plants	753,700	399,600	53.02	225,301	20,549,556	4.4	0.9	N/A
Utsunomiya City	Tochigi	Renewal and seismic retrofitting of facilities whose useful lives have expired	1,140,877	618,800	54.24	470,203	95,640,745	0.8	1.2	 Sludge recycling rate 100% (delivery to recycling plants, composting companies, and cement companies)
Sano City	Tochigi	Seismic retrofitting of settling basin tank pump buildings at Sano City Water Processing Center, etc.	251,810	118,300	46.98	79,608	16,659,942	N/A	N/A	 Ensuring of stable sewage treatment functions by seismic retrofitting
Mibu Town	Tochigi	Renewal of sewage treatment facilities	271,000	108,400	40.00	27,617	4,826,907	N/A	N/A	N/A
Maebashi City	Gunma	Renewal of beyond durable life equipment at water purification centers	214,694	118,400	55.15	236,936	39,340,360	N/A	N/A	 Sale of carbonized sludge as raw material for solid fuel to private companies Utilization of electric power generated at the city's waste incineration plant for maintenance and management of facilities (self-wheeling electricity)

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Takasaki City	Gunma	Renewal of equipment at specific environmental conservation public sewerage facilities	12,870	8,000	62.16	59	83,067	1.4	1.1	 Sludge recycling rate 100% (firing, composting)
Hanyu City	Saitama	Renovation and renewal of water treatment facilities at the city's water purification center, etc.	749,750	340,200	45.38	19,824	2,678,454	3.8	1.5	 Sludge recycling rate: 71.3% (Out of a total dewatered sludge volume of 1,432.75 m³, 410.9 m³ is incinerated (consigned to Saitama Prefecture), and 1,021.85 m³ is used as fertilizer (consigned to private companies))
Funabashi City	Chiba	Installation of electrical equipment for separate / intercepting sewage pumps and the renewal of instrumentation equipment at Takase Sewage Treatment Plant	1,350,315	613,600	45.44	263,500	32,882,874	3.2	0.6	 Annual total electricity consumption reduced: 520kWh (Estimate) Sludge recycling rate 100% (cement materials, etc.) Utilization of sewage heat for cold / hot water generators (air conditioning in administration buildings) A power generation project utilizing digestion gas generated from sewage sludge as fuel by adopting the Feed-in Tariff System (FIT) under the PFI system
		Construction of rainwater sedimentation tank facilities and combined pump equipment at Nishiura Sewage Treatment Plant, etc.	734,553	307,500	41.86	110,700	24,844,920	0.6	0.7	 Annual total electricity consumption reduced: 43,619kWh (Estimate) Sludge recycling rate 100% (cement materials, etc.) A power generation project utilizing digestion gas generated from sewage sludge as fuel by adopting the Feed-in Tariff System (FIT) under the PFI system
Fujisawa City	Kanagawa	Entrustment of construction of a rainwater reservoir (combined-type) at Tsujido Purification Center	1,357,945	779,900	57.43	415,580	54,968,140	N/A	N/A	N/A
Toyama City	Toyama	Renovation and seismic retrofitting of water treatment facilities at sewage treatment plants, etc.	606,126	325,020	53.62	378,379	56,780,421	N/A	N/A	 A power generation project under a PFI system utilizing digestion gas generated in the sewage treatment process
Fukui City	Fukui	Renewal for aging facilities	30,867	14,531	47.08	231,063	60,690,808	N/A	N/A	N/A
Echizen City	Fukui	Renewal of equipment at sewage treatment facilities	17,008	17,008	100	N/A	N/A	N/A	N/A	N/A

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		Renovation of lighting facilities at Amori Pump Station	4,862	4,800	98.72	19,671	1,663,761	N/A	N/A	 Annual total electricity consumption reduced: 1,994kWh (Estimate)
Nagano City	Nagano	Seismic retrofitting of the main administration building of Shinshu-Shinmachi Purification Center	47,000	19,300	41.06	1,398	144,928	1.9	1.4	 Sludge recycling rate 100% (cement raw material)
		Renovation to enhance water resistance capabilities and the installation of dehydrators in the main administration building of Tobu Purification Center	272,230	128,200	47.09	442.044	20.000.050	008,858 3.4		 Annual total electricity consumption reduced: 714,718kWh (Estimate) Sludge recycling rate 100% (cement raw material)
		Renovation of lighting facilities at Tobu Purification Center	67,400	67,400	100	143,211	20,008,858		5.0	 Annual total electricity consumption reduced: 15,450kWh (Estimate) Sludge recycling rate 100% (cement raw material)
Matsumoto City	Nagano	Renovation of Ryoshima Purification Center	506,200	260,800	51.52	75,326	12,552,996	2.6	0.4	 Higher seismic resistance to enhance the stability of sewage treatment
Gifu City	Gifu	Renovation of plant machinery and electrical equipment	1,790,633	757,900	42.33	280,240	44,706,465	3.8	0.4	N/A
Okazaki City	Aichi	Renovation and renewal of sewage treatment facilities and construction based on post-disaster restoration plans for sewage treatment facilities	214,674	69,000	32.14	7,767	736,543	N/A	N/A	N/A
Nabari City	Mie	Renovation of monitoring and control facilities at Central Purification Center and reconstruction of Nanbu Tsutsujigaoka Treatment Plant	72,176	57,800	80.08	43,533	5,056,586	15.0	2.0	 Sludge recycling rate 100% (composting)
Otsu City	Shiga	Renewal of controllers at a sewage treatment plant based on stock management plans, etc.	1,667,067	215,000	12.90	338,250	47,452,467	2.0	0.1	 Sludge recycling rate 92.1% (conversion of sewage sludge into fuel (carbonized)) Improvement of heat pump efficiency by installing a heat exchanger in the chlorine mixing basin of Water Reclamation Center and using untreated sewage as a heat source for air conditioning Reduction of final disposal volumes and reduction of maintenance & administrative costs, energy generation, and GHG emission reduction by converting sewage sludge into fuel (carbonized)
Suita City	Osaka	Renewal of discharge pump facilities	317,073	114,400	36.08	N/A	28,777,631	N/A	N/A	N/A
Moriguchi City	Osaka	Renewal of auxiliary facilities required for functional recovery of the plant	234,548	143,700	61.27	140,974	23,832,679	N/A	N/A	N/A

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Covered Area Population (persons)	Annual Water Management Capacity (㎡)	Water Quality (BOD) (After treatment, Year/Period Average) (mg/L)	Water Quality (Phosphorus) (After treatment, Year/Period Average) (mg/L)	Other positive environmental impact
Yao City	Osaka	Renovation of a sewage treatment plant as part of Osaka prefecture basin sewerage project	60,604	60,600	99.99	N/A	N/A	N/A	N/A	N/A
Himeji City	Hyogo	Renewal of aging sewage treatment facilities	2,352,502	436,201	18.54	427,969	82,085,271	4.9	1.0	 Sludge recycling rate 99.1% (95.5% of the generated sludge is sent to Hyogo Nishi Sludge Center, where it is converted into slag for use as construction materials, etc. The rest is converted into cement and fertilizer at private disposal centers, etc.)
Wakayama City	Wakayama	Renovation of sewage treatment plant facilities and beyond durable life monitoring and control facilities	200,000	90,900 81,800	45.45 40.90	137,227	27,009,601	3.7	0.2	 Reduction of CO₂ emissions from power generation through energy-saving monitoring and control facilities
City		Renovation of sewage treatment plant buildings and rooftop waterproofing equipment beyond its useful life	11,067	5,300	47.89		2.3	1.2	 Extension of the durable life of the entire building and mitigations of the environmental impact 	
Kure City	Hiroshima	Renewal of monitoring and control facilities at purification centers, etc.	423,390	288,175	68.06	180,992	22,793,492	15.0	3.0	 Annual total electricity consumption reduced: 16,670,439kWh Sludge recycling rate 100% (composting, conversion to cement)
lwakuni City	Yamaguchi	Renewal of equipment and facilities at Ichimonji Sewage Treatment Plant	532,115	244,225	45.90	20,683	7,473,400	N/A	N/A	N/A
Tokushima City	Tokushima	Renewal of facilities at treatment plants	550,962	271,157	49.22	75,575	21,731,600	N/A	N/A	N/A
		Renovation and renewal of aging pipes(rehabilitation and replacement of pipes)	291,163	232,470	79.84	78,119	14,295,787	N/A	N/A	
Imabari City	Enime	Renewal of machinery and equipment at drainage treatment facilities in agricultural communities	97,584	78,600	80.55	78,988	14,282,717	2.1	1.2	IN/A
Kitakyushu City	Fukuoka	Construction of facilities to improve the combined sewer system at Hiagari Purification Center	2,035,636	1,015,239	49.87	914,684	150,954,452	1.2	0.3	 Annual total electricity consumption reduced: 15,400kWh (Estimate) Sludge recycling rate 100%(conversion to cement raw materials and fuel) Effective use of sewage sludge for digestion gas power generation (567,230kWh/year)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Covered Area Population (persons)	Annual Water Management Capacity (㎡)	Water Quality (BOD) (After treatment, Year/Period Average) (mg/L)	Water Quality (Phosphorus) (After treatment, Year/Period Average) (mg/L)	Other positive environmental impact
Nagasaki City	Nagasaki	Renovation of mechanical and electrical equipment for Chubu Morimachi Flow Control Pond	1,420,942	743,306	52.31	371,559	43,685,876	N/A	N/A	 Reduction of power consumption by replacing equipment with environmentally friendly, energy-saving equipment
Yatsushiro City	Kumamoto	Renewal of pump facilities and lighting facilities in the administration building under stock management plans	16,907	8,400	49.68	60,538	5,492,375	1.5	0.4	 Sludge recycling rate 100% (composting the entire amount) Reduction of power consumption through the use of high-efficiency and energy-saving equipment
Miyazaki City	Miyazaki	Renewal of an egg-shaped digester agitator from existing draft tube-type to impeller-type	1,002,471	246,047	24.54	356,390	50,368,618	N/A	N/A	 Reduction of power consumption by about 83% by lowering the output of the existing electric motor from 22kWh to 3.7kWh, while maintaining the current agitation capacity
Total Amo	unt of Sewage	Treatment Plant (Renewal) (44 projects)	23,084,955	10,008,511						

Advanced Treatment Plant (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Covered Area Population (persons)	Annual Water Management Capacity (㎡)	Water Quality (BOD) (After treatment, Year/Period Average) (mg/L)	Water Quality (Phosphorus) (After treatment, Year/Period Average) (mg/L)	Other positive environmental impact
Nishinomiya City	Hyogo	Construction (Part 3) in Edagawa Purification Center, etc.	621,289	297,180	47.83	480,931	62,611,110	N/A	N/A	N/A
Total Amo	ount of Advance	ed Treatment Plant (Renewal) (1 project)	621,289	297,180						

Sludge Treatment Plant (New)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Covered Area Population (persons)	Annual Water Management Capacity (㎡)	Water Quality (BOD) (After treatment, Year/Period Average) (mg/L)	Water Quality (Phosphorus) (After treatment, Year/Period Average) (mg/L)	Sludge recycling rate (Year/ Period Average) (%)	Other positive environmental impact
Toyama City	Toyama	Design for construction of sludge digestion tank at sewage treatment plants and the installation of dehydrator washing machines	79,080	33,876	42.84	378,379	56,780,421	N/A	N/A	N/A	N/A
Echizen City	Fukui	Construction of mechanical concentration facilities and sludge pretreatment facilities, mechanical and electrical equipment to start joint treatment of sewage sludge in the treatment areas and human waste and septic tank sludge in the service areas of Nanetsu Waste Management Association	1,354,780	712,655	52.60	44,761	6,080,000	3.0	1.1	100	 Sludge recycling (reuse by a contractor as fertilizer and raw material for cement) Effective use of digestion gas generated during sludge digestion as fuel for heating of digestion tanks and heated swimming pools in local communities Reductions in the amount of incinerated gas by a FIT program under a PFI scheme to sell gas to electricity sales companies Increased digestion gas produced through joint treatment of sewage sludge and human waste/septic tank sludge
Nabari City	Mie	A project to expand Central Purification Center	1,458,885	493,600	33.83	43,533	5,056,586	15.0	2.0	100	 Sludge recycling(composting)
Hatsukaichi City	Hiroshima	Expansion of sludge treatment plants at Hatsukaichi Purification Center	137,230	67,200	48.97	75,854	8,359,548	N/A	N/A	N/A	 Dealing with the increased treated water in line with the expansion of sewage treatment areas
lwakuni City	Yamaguchi	Expansion of equipment and facilities at lchimonji terminal sewerage treatment plant	348,300	143,800	41.29	20,683	7,473,400	N/A	N/A	61	 Sludge recycling (composting)
Marugame City	Kagawa	Construction of a new purification center to address the aging and low seismic resistance issues of the current purification center	1,122,062	620,160	55.27	48,306	9,059,640	3.9	0.6	N/A	 Annual total electricity consumption reduced: 33,472kWh Reduction of GHG emissions by reducing the scale of new facilities and introducing energy- saving equipment
Total A	mount of Slude	Treatment Plant (New) (6 projecte)	4 500 227	2 074 204							

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Covered Area Population (persons)	Annual Water Management Capacity (㎡)	Water Quality (BOD) (After treatment, Year/Period Average) (mg/L)	Water Quality (Phosphorus) (After treatment, Year/Period Average) (mg/L)	Sludge recycling rate (Year/ Period Average) (%)	Other positive environmental impact
Sendai City	Miyagi	Construction of a disinfection tank gate facility at Minami-Gamo Purification Center	121,067	78,000	64.43	1,049,809	144,382,213	N/A	N/A	N/A	 Improvement backflow during water treatment function stop in the event of a disaster
Hitachinaka City	Ibaraki	Renovation and seismic retrofitting of terminal sewerage treatment plant	448,842	195,100	43.47	44,830	8,062,297	1.8	2.3	N/A	 Annual total electricity consumption reduced: 30,263 kWh Fuel consumption reduced by ~ 20% after the replacement with private power generators
Toyama City	Toyama	Basic design work to enhance water resistance capabilities of sludge treatment plants at Hamakurosaki Purification Center, etc	92,612	45,682	49.33	378,379	56,780,421	N/A	N/A	N/A	N/A
Matsumoto City	Nagano	Renovation of Miyabuchi Purification Center	870,990	453,300	52.04	125,187	27,882,000	4.4	5.6	N/A	 Sludge recycling (used for digestion gas power generation facilities and for dehydrated cake as raw materials for cement) Renovation and seismic retrofitting of aging facilities contributing to stable sewage treatment
Tokai City	Aichi	Renewal of dust removal equipment and blowers at purification centers	2,765	1,106	40.00	98,679	9,057,471	1.7	0.4	N/A	N/A
Uji City	Kyoto	Renewal of digestion tanks	273,675	124,600	45.53	63,560	6,684,372	N/A	N/A	64	 Annual total electricity consumption reduced: 80,000kWh (Estimate) Sludge recycling (cement raw materials)
Suita City	Osaka	Design of construction of sludge control buildings	45,105	19,680	43.63	N/A	22,078,950	N/A	N/A	N/A	N/A
Nishinomiya City	Hyogo	Renovation of No. 3 and No. 4 blowers at Koshienhama Purification Center	2,834,541	1,355,839	47.83	480,931	62,611,110	N/A	N/A	N/A	N/A
Tottori City	Tottori	Renovation of treatment plants	15,950	15,950	100	N/A	N/A	N/A	N/A	N/A	 Contributing to the optimal and stable treatment of sewage through measures to prevent earthquake-induced damage and extend the life of water treatment facilities
lmabari City	Ehime	Renewal of sludge treatment equipment and electrical equipment of the Treatment Plant in Imabari treated areas	155,000	59,770	38.56	74,291	13,872,717	2.8	1.3	40	 Sludge recycling (conversion to cement and compost by entrusting the process to a private company) Reduction in the moisture content of dewatered cakes and the amount of sludge to be transported
Total Amo	unt of Sludge T	Freetment Plante (Penowal) (10 projecte)	4 960 547	2 240 027							

Pump Station (New)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Covered Area Population (persons)	Annual Water Management Capacity (rrt)	Water Quality (BOD) (After treatment, Year/Period Average) (mg/L)	Water Quality (Phosphorus) (After treatment, Year/Period Average) (mg/L)	Other positive environmental impact
Sendai City	Miyagi	Installation of settling basins at Suwa Pump Station. Construction of a sewage pump station to promote a project to enhance combined sewerage systems	920,930	461,000	50.06	1,049,809	144,382,213	N/A	N/A	 Reduction of pollution load in public water areas during rainy weather, improvement of water quality and mitigations of flood damage
Ichikawa City	Chiba	Construction of a pump station required for the reorganization of drainage areas for public sewerage (rainwater)	806,210	527,800	65.47	12,072	309,399,696	N/A	N/A	 Efficient drainage of inland water in an area of approx. 70ha where urban functions and populations are concentrated
Matsumoto City	Nagano	Installation of sewage pumps at Nagisa Relay Pump Station	17,386	7,800	44.86	12,617	1,857,348	N/A	N/A	N/A
Matsusaka City	Mie	Expansion of Pump Station in Shiohama drainage area Okisu (with electrical equipment)	276,101	143,200	51.87	906	1,175,040	N/A	N/A	Contributing to flood control in the city area
Yao City	Osaka	Construction of a new pump station as part of Osaka prefecture basin sewerage project	9,147	9,100	99.49	N/A	N/A	N/A	N/A	N/A
			182,632	88,400	48.40					
			149,751	68,000	45.41					- Cardwille, where the annual time the discharge of
Wakayama City	Wakayama	Construction of a rainwater pump station	22,930	10,500	45.79	137,227	27,009,601	N/A	N/A	 Contributing to preventing the discharge of untreated sewage into public waters during flooding or beavy rain
			47,084	22,100	46.94					nooung of neavy rain
			50,000	22,700	45.40					
Hatsukaichi City	Hiroshima	Installation of additional rainwater pumps at Ogi Pump Station	28,421	16,900	59.46	75,854	8,359,548	N/A	N/A	 Contributing to flood control in Jigozen area
Imabari City	Ehime	Installation of a sewage relay pump station required for sewage installation to the eastern treatment system in Imabari District	317,200	142,260	44.85	6,710	1,087,700	N/A	N/A	N/A
Nagasaki City	Nagasaki	Construction of new pump facilities	38,630	20,208	52.31	371,559	43,685,876	N/A	N/A	 Reduction of power consumption by installation of environmentally-conscious equipment, including energy-saving equipment
Miyazaki City	Miyazaki	Civil engineering work and electrical and mechanical installation work for a new rainwater pump station	451,961	110,930	24.54	361,945	50,940,496	N/A	N/A	N/A
Tot	al Amount of F	Pump Station (New) (14 projects)	3,318,383	1,650,898						

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Covered Area Population (persons)	Annual Water Management Capacity (㎡)	Water Quality (BOD) (After treatment, Year/Period Average) (mg/L)	Water Quality (Phosphorus) (After treatment, Year/Period Average) (mg/L)	Other positive environmental impact
Hakodate City	Hokkaido	Installation of electrical instrumentation equipment at Shinori Pump Station to renew monitoring facilities at Shinori Pump Station and Shinminato Pump Station	314,221	190,700	60.69	5,840	701,440	N/A	N/A	N/A
Ebetsu City	Hokkaido	Renewal of sewage pump electrical equipment at Ebetsubuto Relay Pump Station	714,029	220,769	30.92	115,375	16,891,502	N/A	N/A	 Annual total electricity consumption reduced: 208,262kWh (Estimate)
Aomori City	Aomori	Renewal of facilities of aging relay pump stations	549,452	278,328	50.66	1,052	N/A	N/A	N/A	N/A
Sendai City	Miyagi	Renovation of electrical equipment at Hitokita Pump Station	661,025	415,000	62.78	1,049,809	144,382,213	N/A	N/A	 Contributing to securing wastewater treatment functions at wastewater pump stations
Akita City	Akita	Renewal of machinery and equipment at a sewage relay pump station, ,etc.	367,357	171,740	46.75	287,851	11,982,890	N/A	N/A	N/A
Sano City	Tochigi	Renovation and renewal of settling basin water treatment and electrical equipment at relay pump stations in Akiyamagawa and Iseyama	205,550	93,900	45.68	79,608	16,659,942	N/A	N/A	 Ensuring of stable sewage treatment functions by reducing the risk of malfunctions
Mibu Town	Tochigi	Renewal of pump station facilities	17,629	13,100	74.31	27,617	4,826,907	N/A	N/A	N/A
Maebashi City	Gunma	Renewal of beyond durable life equipment/systems based on stock management plans	197,956	77,200	39.00	236,936	39,340,360	N/A	N/A	 Sale of carbonized sludge as raw material for solid fuel to private companies Effective use of electric power generated at the city's waste incineration plant for maintenance and management of the facility (self-wheeling electricity)
Misato City	Saitama	Entrustment of design work to improve the city's relay pump station	8,470	4,200	49.59	126,443	12,952,516	N/A	N/A	N/A
Tachikawa City	Tokyo	Renewal of remote monitoring equipment at sewage relay pump stations and three manhole pump stations	123,616	123,600	99.99	39,017	679,650	N/A	N/A	N/A
Fujisawa City	Kanagawa	Renovation of the main inflow gate at Nishihama Pump Station	35,200	35,200	100	223,779	33,292,760	N/A	N/A	N/A
Toyama City	Toyama	Basic design work to enhance water resistance capabilities of sewage pump stations and rainwater pump stations, etc.	8,429	3,792	44.99	378,379	56,780,421	N/A	N/A	N/A

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Covered Area Population (persons)	Annual Water Management Capacity (㎡)	Water Quality (BOD) (After treatment, Year/Period Average) (mg/L)	Water Quality (Phosphorus) (After treatment, Year/Period Average) (mg/L)	Other positive environmental impact
Fukui City	Fukui	Renewal projects for Kamogawara Pump Station, Asuwa Pump Station, etc.	4,414,655	2,015,417	45.65	231,063	60,690,808	N/A	N/A	N/A
Echizen City	Fukui	Reconstruction and detailed design of monitoring facilities at manhole pump stations, etc.	31,878	23,078	72.39	N/A	N/A	N/A	N/A	N/A
Matsumoto City	Nagano	Renovation of Nagisa Relay Pump Station	37,400	16,800	44.92	12,617	1,857,348	N/A	N/A	 Contributing to stable sewage treatment by renovation and seismic retrofitting of aging facilities
Okazaki City	Aichi	Renewal of mechanical and electrical equipment at a pump station	302,989	203,100	67.03	342,351	36,009,432	N/A	N/A	N/A
Handa City	Aichi	Maintenance of a drainage pump station	1,158,253	628,841	54.29	104,990	11,633,337	N/A	N/A	 Contributing to the safety of community by optimally renewing facilities / equipment to maintain the drainage capacity of the six drainage pump stations in the city
Takai City	Aichi	Renewal of pump and water treatment facilities at Motohama Pump Station	508,745	228,894	44.99	5,366	4,925,676	N/A	N/A	N/A
Tokar City	Aichi	Renewal of pump and water treatment facilities at Tenpo Pump Station	61,781	27,800	45.00	14,554	2,189,552	N/A	N/A	N/A
Ikeda City	Osaka	Renewal of aging sewage pump facilities and extension of power panel functions for inverter control of water pumps for landscaping purposes	84,700	48,510	57.27	80,332	18,963,864	N/A	N/A	 Annual total electricity consumption reduced: 95,040kWh (Estimate) Contributing to stable sewage treatment by renewing aging sewage pump facilities
Suita City	Osaka	Renewal of rainwater pump facilities	141,462	69,950	49.45	N/A	5,323,614	N/A	N/A	N/A
Moriguchi City	Osaka	Upgrading and renewal of sewage pumps and auxiliary equipment	172,140	155,700	90.45	140,974	23,832,679	N/A	N/A	N/A
Yao City	Osaka	Renovation of pump stations as part of Osaka prefecture basin sewerage project	213,721	213,700	99.99	N/A	N/A	N/A	N/A	N/A

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Covered Area Population (persons)	Annual Water Management Capacity (㎡)	Water Quality (BOD) (After treatment, Year/Period Average) (mg/L)	Water Quality (Phosphorus) (After treatment, Year/Period Average) (mg/L)	Other positive environmental impact
Nishinomiya City	Hyogo	Renovation of No. 3 rainwater pump facilities at Hama Pump Station	1,143,035	546,745	47.83	480,931	62,611,110	N/A	N/A	N/A
Kakogawa City	Hyogo	Construction of pump station facilities and seismic reinforcement	428,224	241,000	56.28	20,000	1,570,217	N/A	N/A	 Energy savings with the renewal of aging machinery and electrical equipment
Wakayama		Renovation of rainwater pump station facilities and renewal of DC power supply systems beyond its useful life	18,128	8,200	45.23	407.007	07.000.004	N//A		Contributing to prevention of discharge of
City	wakayama	Renovation of rainwater pump station facilities and renovation of beyond durable life rainwater pump equipment	336,579	154,300	45.84	137,227	27,009,601	N/A	N/A	by flooding or heavy rain
Tottori City	Tottori	A project to expand pump stations	530,790	270,468	50.96	33,424	3,770,311	N/A	N/A	 Prevention and mitigation of flood damage
Kure City	Hiroshima	Renewal of monitoring / control facilities at pump stations	339,551	147,693	43.50	180,992	22,793,492	15.00	3.00	 Annual total electricity consumption reduced: 16,670,439kWh
Hatsukaichi City	Hiroshima	Design for renovation and renewal of electrical equipment at aging Ogi Pump Station	55,919	31,800	56.87	75,854	8,359,548	N/A	N/A	N/A
lwakuni City	Yamaguchi	Renovation of existing rainwater drainage facilities affected by uneven settlement	1,372,532	270,200	19.69	6,989	792,040	N/A	N/A	N/A
Tokushima City	Tokushima	Renovation of cooling water system facilities at Uchimachi Pump Station including the renewal of pump facilities, etc.	107,861	100,143	92.84	75,575	21,731,600	N/A	N/A	 Annual total electricity consumption reduced: 16,445kWh (Estimate)
Marugame City	Kagawa	Maintenance of multiple pump stations	108,495	57,119	52.65	48,306	9,059,640	N/A	N/A	 Annual total electricity consumption reduced: 48,701kWh Reduction of CO₂ emissions by installing energy-saving equipment
Imabari City	Ehime	Renovation and renewal of aging facilities	748,700	347,480	46.41	79,610	6,841,211	N/A	N/A	N/A

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Covered Area Population (persons)	Annual Water Management Capacity (㎡)	Water Quality (BOD) (After treatment, Year/Period Average) (mg/L)	Water Quality (Phosphorus) (After treatment, Year/Period Average) (mg/L)	Other positive environmental impact
Kitakyushu City	Fukuoka	Upgrade of remote monitoring and other electrical instrumentation equipment installed at Shirono Pump Station	848,462	492,999	58.11	914,684	150,954,452	N/A	N/A	N/A
Nagasaki City	Nagasaki	Renewal of a remote monitoring facility at a rainwater drainage pump station in Chubu Morimachi, etc.	11,463	5,996	52.31	371,559	43,685,876	N/A	N/A	 Reduction of power consumption by replacing the existing equipment with more environmentally-friendly, energy saving equipment
Yatsushiro City	Kumamoto	Renewal of settling basin equipment	381,080	192,000	50.38	60,538	5,492,375	N/A	N/A	 Reduction of power consumption by using high-efficiency equipment
Miyazaki City	Miyazaki	Consignment of detailed design work to enhance water resistance capabilities of rainwater pump stations, and renovation of settling basin facilities, including sedimentation and sand haulers, sediment haulers, and sedimentation and screenings hoppers	856,080	210,117	24.54	361,945	50,940,496	N/A	N/A	 Contributing to improved environmental through stable sewage treatment
Total	Total Amount of Pump Station (Renewal) (38 projects)			8,335,579						

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Newly constructed pipe length (m)	Covered Area Population (persons)	Annual volume of treated water to be increased by the new construction of sewer pipes (ml)	Other positive environmental impact
Hakodate City	Hokkaido	Installation of rainwater pipes	236,177	166,600	70.54	841	205,120	N/A	 Prevention of untreated sewage from being discharged into the sea during flooding or heavy rain
Ebetsu City	Hokkaido	Construction of new public sewage basins, etc.	69,128	63,903	92.44	N/A	115,375	N/A	N/A
Aomori City	Aomori	Construction of new sewage pipes in sewer uncovered areas	302,052	236,760	78.38	374	42	N/A	 Securing of water quality in public waters
Kitakami City	Iwate	Construction of networks of public sewerage systems for agricultural community drainage	97,157	52,100	53.62	375	743	N/A	 Maintenance of water quality in rivers, lakes, marshes, etc. and a stable water environment by connecting to public sewerage networks
Oshu City	lwate	Construction of new pipes to expand the city's sewerage networks and sewerage coverage	1,636,860	993,900	60.72	6,574	51,384	73,548	 Reduction of CO₂ emissions by reducing the number of service vehicles in line with decreasing pumping operations Reduction of sewage outflow with expanding sewerage coverage
Sendai City	Miyagi	Construction of No. 3 rainwater trunk line in Hirose River	3,851,171	1,938,000	50.32	4,050	1,049,809	N/A	N/A
Natori City	Miyagi	Installation of sewage pipes and rainwater pipes	675,623	240,300	35.57	N/A	78,908	N/A	N/A
Akita City	Akita	Construction of sewage pipes and rainwater pipes	1,421,496	928,650	65.33	2,701	3,194	486,236	 Conservation of water quality and improvement of the living environment by installing sewage pipes Installation of rainwater pipes and drainage pump facilities to prevent inundation and improve living environment Reduction of use of chemicals and electric power by terminating sewage treatment at drainage treatment facilities in agricultural communities to connect to public sewerage systems (regional sewerage systems for specific environmental conservation) and switching to sewage treatment at regional sewerage facilities in the prefecture
Mito City	Ibaraki	Construction of new pipes	1,451,700	1,083,000	74.60	5,588	225,301	347,677	 Improvement of public health and water quality in public waters by increasing the number of households using flush toilets
Hitachinaka City	Ibaraki	Installation of sewage pipes to eliminate uncovered areas of sewage treatment and rainwater pipes to prevent flooding	1,719,265	754,800	43.90	3,911	101,110	27,452	 Contributing to the preservation of water quality in public waters in the city

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Newly constructed pipe length (m)	Covered Area Population (persons)	Annual volume of treated water to be increased by the new construction of sewer pipes (ml)	Other positive environmental impact
Utsunomiya City	Tochigi	Installation of new pipes in public sewerage areas and uncovered areas of specific environmental conservation public sewerage systems as an environmental conservation initiative	438,873	218,000	49.67	2,232	470,203	N/A	N/A
Sano City	Tochigi	Installation of new pipes	821,472	480,500	58.49	4,182	79,608	140,000	N/A
Mibu Town	Tochigi	Installation of new pipes	335,608	181,500	54.08	N/A	27,617	52,490	N/A
Maebashi City	Gunma	Installation of new pipes	943,956	611,700	64.80	7,222	236,936	N/A	 Effective use of electricity generated at the waste incineration plant in the city for facility maintenance and management (self-wheeling electricity)
Takasaki City	Gunma	Installation of new sewage pipes in sewer uncovered areas and rainwater pipes for urban inundation control	1,813,471	1,070,100	59.01	18,845	283,282	156,103	 Water quality index (Year/Period average) (BOD) 2.5 mg/L Water quality index (Year/Period average) (total phosphorus) 1.1 mg/L Sludge recycling rate 100%(firing and fertilizing)
Tokorozawa City	Saitama	Installation of partial sewerage systems in each area	1,978,816	1,426,400	72.08	6,332	318	65	N/A
Hanyu City	Saitama	Installation of the first branch line pipes at Hanyu (Part 1), etc.	115,949	74,000	63.82	1,416	19,824	N/A	N/A
Yashio City	Saitama	Installation of sewerage pipes for discharging water to public sewerage systems and rainwater pipes to discharge rainwater	1,929,919	1,059,800	54.91	7,702	77,498	N/A	 Sound city development and improvement of public health and conservation of water quality in public waters
Misato City	Saitama	Pipe installation, consignment of constructioon design, consignment of geological surveys, etc.	1,359,133	1,101,800	81.07	11,327	126,443	100,225	N/A
lchikawa Citu	Chiha	Installation of new sewage pipes in uncovered areas of a public sewage system	5,383,282	3,926,000	72.93	12,100	1,606	747	 Gradual improvement of water quality in public water areas by switching from isolated septic tanks, which have substantial environmental impact, to public sewerage systems
ionikawa oliy	Giliba	Installation of new rainwater pipes in undeveloped areas of public sewerage (rainwater)	1,478,997	881,100	59.57	100	N/A	N/A	 Mitigation of house damage in densely-populated areas by installing rainwater trunk line pipes

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Newly constructed pipe length (m)	Covered Area Population (persons)	Annual volume of treated water to be increased by the new construction of sewer pipes (ml)	Other positive environmental impact
Funabashi City	Chiba	Sewage pipe and rainwater pipe installation project	3,751,967	2,407,600	64.17	8,398	595,606	N/A	 Improvement of water quality and prevention of inundation by installation of rainwater pipes
Matsudo City	Chiba	Installation of pipes	1,401,017	916,500	65.42	8,101	443,817	530,000	 Improvement of environmental sanitation through expansion of sewerage coverage areas
Kashiwa City	Chiba	Construction of separate sewerage in sewer uncovered areas	1,281,378	1,070,300	83.53	5,183	396,043	187,126	 Improvement of water environment by promoting appropriate sewage treatment
Fujisawa City	Kanagawa	Installation of sewage pipes in Yoda areas	82,665	71,300	86.25	621	203,524	2,628,258	N/A
Chigasaki City	Kanagawa	Installation of new sewage pipes	67,332	30,293	44.99	137	224 656	NZA	 Preservation of water quality in public waters and creation of a comfortable living environment
onigasaki oliy	Kanayawa	Installation of new rainwater pipes	1,575,331	1,088,601	69.10	720	224,000	N/A	 Mitigation of risks of flood damage
Toyama City	Toyama	Installation of sewerage pipes in undeveloped areas and other areas requiring the installation, maintenance of rainwater trunk lines and storage facilities, and upsizing of existing sewerage pipes	2,011,190	1,099,833	54.69	819	378,379	N/A	 Utilization of heat from sewer pipes as a heat source for air conditioner systems in office buildings of the Water and Sewerage Bureau
Fukui City	Fukui	Installation of pipes in sewer uncovered areas	3,354,432	2,635,712	78.57	24,403	231,063	719,479	N/A
Echizen City	Fukui	Installation of pressure pipe and sewage branch lines as part of a joint sludge treatment project	660,949	607,985	91.99	5,264	13,260	40,000	N/A
Nagano City	Nagano	Sewage works in Toyonoshiroyama and Arigasaki drainage treatment areas	90,477	40,600	44.87	N/A	31	N/A	N/A
Nagano Olty	Nagano	Construction of new rainwater drains	1,160,332	560,800	48.33	N/A	344,068	IN/A	 Prevention of inundation/flooding in residential areas, etc.

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Newly constructed pipe length (m)	Covered Area Population (persons)	Annual volume of treated water to be increased by the new construction of sewer pipes (ml)	Other positive environmental impact
Matsumoto City	Nagano	Connection of wastewater in Hada district to Saigawa Azumino regional sewage systems managed and operated by Nagano Pre. after shutting down the aging Hada Purification Center	8,256	7,800	94.48	N/A	15,203	N/A	 Enhancement of operational efficiency through joint operation of purification centers
		Construction of new Chikuma sewage trunk lines	100,000	45,000	45.00	40	8,924		 Discharge of overflow from relay trunk lines (junction area) in rainy weather
Gifu City	Gifu	Installation of sewerage pipes	566,654	413,800	73.03	2,175	376,080	49,889	N/A
Okazaki City	Aichi	Installation of pipes	1,292,398	696,600	53.90	N/A	342,351	N/A	N/A
Handa City	Aichi	Installation of pipes in Handa East, Chuo and Minato drainage area	303,604	205,486	67.68	1,044	104,990	N/A	 Reduction of flood damage caused by localized intense downpours occur frequently
Yokkaichi City	Mie	Construction of new sewer pipes, etc.	6,243,788	3,128,100	50.10	11,706	252,479	319,754	 Improvement of water environment in sewer uncovered areas
Matsuzaka City	Mie	Replacement of sewage pipes and distribution pipes in No. 6-19 of Matsuzaka No. 1 Treatment Subdivision as part of Matsuzaka City Public Sewerage Project	2,453,033	1,456,900	59.39	12,512	2,248	63,744	N/A
ony		Construction of No. 276 rainwater pipes in Atago River drainage area as part of Matsuzaka City Public Sewerage Project	219,366	159,100	72.53	248	64,322	N/A	 Contributing to mitigations of flood damage
Nabari City	Mie	Sewage work on trunk lines and branch lines	51,132	25,900	50.65	266,637	43,533	2,000	N/A
Uji City	Kyoto	Installation of new pipes	115,824	113,200	97.73	636	177,395	12,491	N/A
Suita City	Osaka	Installation of new pipes	1,531,182	672,533	43.92	725	382,336	12,000	N/A
Moriguchi City	Osaka	Construction of Honmachi Matsushita Lines	814,846	719,300	88.27	N/A	140,974	N/A	 Mitigation of flood damage including road flooding and inundation below floor level

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Newly constructed pipe length (m)	Covered Area Population (persons)	Annual volume of treated water to be increased by the new construction of sewer pipes (ml)	Other positive environmental impact
Yao City	Osaka	Installation of new pipes as part of Yao City Public Sewerage Project and Osaka prefecture basin sewerage project	658,776	538,100	81.68	1,451	174	62,837	N/A
Himeji City	Hyogo	Installation of new rainwater and sewage pipes	5,051,777	989,595	19.59	11,099	427,969	4,090,510	N/A
Nishinomiya City	Нуодо	Installation of new public sewerage systems (maintenance of combined storage pipe No.4), etc.	1,144,028	547,220	47.83	382	480,931	N/A	N/A
Kakogawa City	Hyogo	Installation of sewage pipes and maintenance of rainwater pipes	2,869,764	2,363,900	82.37	7,988	430	115,705	N/A
Yamato- takada City	Nara	Piping work in Tsukieda Oyachi, etc.	1,061,403	828,300	78.04	3,316	34,620	64,187	N/A
Wakayama	Wakayama	Installation of new serverage nines	240,549	172,400	71.67	330	137 007	10,467	 Wider areas of sewerage coverage, flood control, and
City	Wakayama	instantation of new sewerage pipes	1,563,245	879,300	56.25	4,108	137,227	130,418	environmental improvement of public waters
Tottori City	Tottori	A project to reduce the range of sewer uncovered areas	766,652	525,496	68.54	N/A	454	N/A	N/A
Kure City	Hiroshima	Construction of sewage trunk lines (No.1) at Kurahashi Chuo, etc.	333,087	280,026	84.07	3,726	180,992	N/A	N/A
Fukuyama	Hiroshima	Installation of now pipes	535,896	418,500	78.09	4,372	249 225	36,515	NZA
City	riiosnima	installation of new pipes	405,403	227,200	56.04	3,307	340,333	27,547	N/A
Hatsukaichi City	Hiroshima	Installation of public sewerage pipes, etc.	1,494,757	810,600	54.23	6,228	75,854	68,548	 Expansion of sewage treatment areas

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Newly constructed pipe length (m)	Covered Area Population (persons)	Annual volume of treated water to be increased by the new construction of sewer pipes (rfl)	Other positive environmental impact
lwakuni City	Yamaguchi	Installation of pipes in public sewerage systems	1,270,426	586,855	46.19	5,601	45,905	N/A	N/A
Tokushima City	Tokushima	Installation of sewerage pipes in Tokushima Town, etc.	1,044,823	789,155	75.53	2,565	75,575	143,959	N/A
Marugame City	Kagawa	Installation of sewage pipes	839,752	307,064	36.57	1,995	48,306	295,270	 Preservation of water quality in public waters and creation of a comfortable living environment
Imabari City	Ehime	Installation of pipes in sewer uncovered areas	693,937	426,390	61.45	3,541	81,578	19,494	N/A
Kitakyushu City	Fukuoka	Installation of rainwater storage pipes in Showa Town	1,632,360	927,013	56.79	5,633	914,684	N/A	N/A
Nagasaki City	Nagasaki	Construction of rainwater pipes in the central No. 3 drainage area, etc.	208,314	108,971	52.31	5,039	371,559	N/A	 Mitigation of flood damage caused by heavy rains by installing rainwater pipes
Yatsushiro City	Kumamoto	Installation of sewerage pipes to expand sewage coverage areas	1,045,688	557,800	53.34	4,072	60,538	183,650	 Contributing to environmental and water conservation
Miyazaki City	Miyazaki	Installation of new sewerage pipes	1,902,687	466,997	24.54	1,883	361,945	N/A	N/A
Kagoshima City	Kagoshima	Construction of new sewerage pipe facilities	1,386,329	871,000	62.83	5,390	465,300	99,455	N/A
Toride Sewage Works Authority	Ibaraki	Installation of sewerage pipes	2,488,865	1,357,900	54.56	N/A	93,232	N/A	 Water quality index (Year/Period average) (BOD) 2.8 mg/L Water quality index (Year/Period average) (total phosphorus) 1.8 mg/L Water quality conservation through elimination of sewer uncovered areas
	Total Amount	of Pipes (New) (66 projects)	85.835.776	50.641.938					

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Newly constructed pipe length (m)	Annual Water Management Capacity (㎡)	Other positive environmental impact
Hakodate City	Hokkaido	Renewal of aging pipes	1,022,352	819,200	80.13	2,967	34,636,675	 Prevention of underground pollution caused by sewage discharged in the event of earthquakes or other natural disasters
Ebetsu City	Hokkaido	Renovation and renewal of pipeline facilities, etc.	412,532	227,728	55.20	1,387	16,891,502	N/A
Aomori City	Aomori	Rehabilitation of aging pipes, etc.	99,757	49,940	50.06	195	N/A	 Extension of service life of pipes
Kitakami City	Iwate	Renewal of manhole covers/pumps	53,901	46,700	86.64	N/A	7,722,747	 Prevention of sewage outflow incidents
Sendai City	Miyagi	Trunk line switching construction work at No. 3 Minami-Gamo	1,626,293	1,426,000	87.68	3,922	144,382,213	 Ensuring backup function for possible damage on the trunk line after a large- scale earthquake
Natori City	Miyagi	Renewal of manhole iron covers	38,405	21,700	56.50	N/A	7,941,982	N/A
Akita City	Akita	Rehabilitation of pipes and renewal of manhole pump facilities	2,057,910	1,145,900	55.68	5,896	36,602,292	 Prevention of cave-in roads, seismic retrofitting of pipes, reductions in use of chemicals / electricity at treatment plants by mitigating water intrusion during rainy weather, and water quality conservation
Mito City	Ibaraki	Renovation of pipe facilities	151,300	118,500	78.32	160	20,549,556	N/A
Utsunomiya City	Tochigi	Rehabilitation of aging pipes in public sewerage areas and seismic retrofitting of pipes	272,110	239,900	88.16	2,232	95,640,745	N/A
Sano City	Tochigi	Maintenance and management of sewerage pipes and sewerage pipe stock management	212,265	120,300	56.67	293	16,659,942	N/A
Maebashi City	Gunma	Renewal of existing pipes	558,554	274,500	49.14	7,222	39,340,360	 Effective use of electric power generated at the city's waste incineration plant for the maintenance and management of facilities (self-wheeling electricity)
Misato City	Saitama	Replacement of manhole covers and renewal of manhole pump facilities	10,250	7,600	74.15	N/A	12,952,516	N/A

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Newly constructed pipe length (m)	Annual Water Management Capacity (㎡)	Other positive environmental impact
Ichikawa City	Chiba	Seismic retrofitting of pipelines and installation of manhole toilets	273,574	178,400	65.21	3,500	N/A	 Ensuring of the minimum required treatment functions in the event of a large- scale earthquake, and ensuring of public health and water quality in the event of a large-scale earthquake
		Renovation and renewal of aging sewer facilities	87,920	39,000	44.36	N/A		Ensuring of public health and water quality in public waters
Funabashi City	Chiba	Renovation and repairs of existing facilities, etc.	505,085	399,000	79.00	2,879	N/A	 Prevention of road cave-ins by extending service life Control of soil pollution
Chofu City	Tokyo	Rehabilitation to prevent aging and deterioration of pipes, etc.	809,183	638,000	78.84	350	39,528,898	N/A
Fujisawa City	Kanagawa	Installation of discharge pipes in southern Tsujido area	330,049	329,800	99.92	235	54,968,140	N/A
Chigasaki City	Kanagawa	Renovation and seismic retrofitting of aging pipes	139,499	47,906	34.34	554	9,781,124	 Prevention of the discharge of untreated water during disasters
Toyama City	Toyama	Renovation of aging sewerage pipes and manhole covers, etc.	842,923	585,027	69.40	2,769	56,780,421	 Utilization of heat from sewer pipes as a heat source for air conditioner systems in office buildings of the Water and Sewerage Bureau
Fukui City	Fukui	Renovation of aging pipes, etc.	701,176	464,639	66.27	3,312	60,690,808	N/A
Echizen City	Fukui	Renewal of manhole covers, etc.	48,974	48,974	100	N/A	N/A	N/A
		Renewal of sewage pipes	569,086	53,400	9.38		41,643,193	 Prevention of underground pollution caused by sewage outflow in the event of natural disasters such as earthquakes by replacing aged pipes
Nagano City	Nagano	Renewal of manhole pump station / pump facilities in Kamisato area and outsourcing of construction design	47,515	21,800	45.88	N/A	22,685	N/A
		Renewal of manhole pump station / pump facilities in Nishikyo / Higashikyo area and outsourcing of construction design	23,742	10,800	45.49			iv/A

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Newly constructed pipe length (m)	Annual Water Management Capacity (㎡)	Other positive environmental impact
Matsumoto City	Nagano	Renewal of pipes to protect critical public infrastructure and crisis management	1,199,368	820,000	68.37	5,411	27,882,000	N/A
Gifu City	Gifu	Replacement of sewerage pipes	766,254	426,900	55.71	4,210	56,108,850	N/A
Okazaki City	Aichi	Renovation of pipes	1,871,884	1,286,300	68.72	N/A	36,009,432	N/A
Handa City	Aichi	Maintenance of sewage pipes in newly covered area	169,005	113,877	67.38	430	11,633,337	N/A
Otsu City	Shiga	Seismic retrofitting of sewerage trunk lines and renovation and renewal of sewerage pipes	1,667,067	211,100	12.66	150	47,452,467	N/A
Uji City	Kyoto	Renovation and renewal of pipes	166,159	114,900	69.15	462	19,144,138	N/A
Ikeda City	Osaka	Rehabilitation of aging pipeline	1,413,448	798,390	56.49	N/A	18,963,864	 Contributing to compliance with environmental standards by ensuring stable sewage flow
Suita City	Osaka	Renewal of pipes	608,287	269,519	44.31	2,452	62,376,650	N/A
Moriguchi City	Osaka	Renovation of sewers	547,984	514,000	93.80	3,429	23,832,679	N/A
Yao City	Osaka	Pipe renovation work under Yao City Public Sewerage Project and Osaka prefecture basin sewerage project	235,115	184,000	78.26	1,375	100,831	N/A
Higashi- osaka City	Osaka	Renewal work to increase earthquake resistance and processing capacity	1,210,981	974,800	80.50	4,673	92,488,126	N/A

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Newly constructed pipe length (m)	Annual Water Management Capacity (㎡)	Other positive environmental impact
Himeji City	Hyogo	Rehabilitation of aging sewerage pipes	869,228	720,904	82.94	5,355	82,085,271	N/A
Nishinomiya City	Hyogo	Renovation of sewerage pipes (R4 Part 3), etc.	1,178,513	563,715	47.83	382	62,611,110	N/A
Tottori City	Tottori	Maintenance of gutters and rainwater pipes, measures to extend the life of sewerage pipes	814,811	462,986	56.82	N/A	N/A	 Prevention of flood damage in urban areas
Kure City	Hiroshima	Rehabilitation of the trunk line at the junction of Niko-gawa River in Shingu, etc.	748,167	422,550	56.48	1,445	22,793,492	 Renewal of aging pipes to prevent underground pollution caused by discharged sewage during earthquakes or other natural disasters
Fukuyama	Hirochimo	Renovation, seismic retrofitting and life	146,016	73,008	50.00	NI/A	20 150 452	N/A
City	Throshima	extension work on pipes, etc.	327,346	315,656	96.43	N/A	00,100,101	
Hatsukaichi City	Hiroshima	Renovation and renewal of aging public sewer pipes, etc.	67,857	23,900	35.22	6,228	8,359,548	N/A
lwakuni City	Yamaguchi	Rehabilitation of aging pipelines	90,400	67,320	74.47	370	7,473,400	N/A
Tokushima City	Tokushima	Renovation of sewerage pipes in Minamishowa-cho 1-chome district (No. 2 construction zone), etc.	357,256	293,214	82.07	280	21,731,600	N/A
Marugame City	Kagawa	Renewal of sewage pipes	839,752	16,497	1.96	376	9,059,640	 Contributing to the conservation of water quality in public waters and the creation of a comfortable living environment
Kitakyushu City	Fukuoka	Rehabilitation of pipes in Takada 1-chome district	148,591	98,749	66.46	931	150,954,452	N/A

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Newly constructed pipe length (m)	Annual Water Management Capacity (㎡)	Other positive environmental impact
Nagasaki City	Nagasaki	Rehabilitation of sewage pipes, etc.	1,065,902	557,582	52.31	437	43,685,876	 Prevention of underground pollution caused by sewage outflow due to aging pipes
Miyazaki City	Miyazaki	Renewal of aging pipes	754,190	185,109	24.54	3,369	50,940,496	N/A
Total Amount of Pipes (Renewal) (48 projects)			28,157,936	16,829,690				

Others (New)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Other positive environmental impact
Kitakami City	Iwate	Contribution for the construction of regional sewerage systems in Iwate Prefecture	37,369	37,300	99.82	N/A
Akita City	Akita	Consignment of design work for new construction of pipes, etc.	264,785	145,290	54.87	N/A
Tachikawa City	Tokyo	Installation of facilities required for sending water from Nishikicho Sewage Treatment Plant to Kitatama Water Reclamation Center No. 2	680,800	317,700	46.67	N/A
Funabashi City	Chiba	Contribution for the construction of regional sewerage systems and for construction in other cities	635,847	579,000	91.06	N/A
Chofu City	Tokyo	A project to shut down the existing pump station by installing new pipes (utilizing the Gravity flow method)	369,204	369,000	99.94	 Annual total electricity consumption reduced: 97,434kWh Reduction of CO₂ emissions by 52.2 tons annually by eliminating pump stations through the Gravity flow method
Kawasaki City	Kanagawa	Construction of multiple facilities, including those for sewage treatment, advanced treatment and sludge treatment, pump stations, pipes, etc.	22,102,900	1,356,000	6.13	 Water quality index (Year/Period average) (BOD) 9 mg/L Water quality index (Year/Period average) (total phosphorus) 0.5 mg/L Reduction of 5,700 tons of carbon dioxide emitted during sludge incineration Sludge recycling rate 98.6% (sludge incineration ash is used as cement) Effective use of sewage sludge as a heat source for heated swimming pools Reduction of CO₂ emissions from small hydropower and solar power generation
Fujisawa City	Kanagawa	Installation of mounting containers (sewage)	48,632	48,200	99.11	N/A
Matsumoto City	Nagano	Installation of rainwater pipes	215,671	128,500	59.58	 Prevention of flood damage by rainwater
Handa City	Aichi	Contribution for the construction of regional sewerage systems	17,986	17,900	99.52	N/A
Hekinan City	Aichi	Installation of sewerage systems in uncovered areas	1,121,407	680,700	60.70	N/A
Nabari City	Mie	Administrative expenses	37,700	37,700	100.00	N/A

Others	(New)
	(11011)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Other positive environmental impact
	Kuata	Contribution for the installation of regional sewerage systems	142,351	141,800	99.61	N/A
Uji City Kyoto		Installation of rainwater storage facilities	354,907	294,600	83.01	IN/A
Nishinomiya City	Hyogo	Contribution for the installation of regional sewerage systems	111	28	25.23	N/A
Kure City	Hiroshima	Design of branch sewer in Ryoshida District, Kurahashi Town, etc.	99,082	62,542	63.12	N/A
Fukuvama			3,344,544	852,337	25.48	N/A
City	Hiroshima		2,647,024	1,957,992	73.97	N/A
		Total Amount of Others (New) (17 projects)	32,120,320	7,026,589		

Others (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Other positive environmental impact
Hakodate City	Hokkaido	Contribution for the regional sewerage systems project in Hakodate Bay	74,637	71,100	95.26	N/A
Aomori City	Aomori	Contribution to the construction of regional sewerage systems in Iwaki River	12,348	12,300	99.61	N/A
Oshu City	Iwate	Contribution to the construction of regional sewerage systems including facility renewal at treatment plants	46,881	46,600	99.40	N/A
Natori City	Miyagi	Contribution for the construction of regional sewerage systems	134,303	126,000	93.82	N/A
		Contribution for the construction of regional sewerage systems in Akita Prefecture	184,267	184,200	99.96	
Akita City	Akita	Consigned design work for implementation of pipes renewal, etc.	27,629	21,460	77.67	N/A
lwaki City	Fukushima	Construction of the merge trunk line in the eastern part, construction of Sekita Pump Station, and construction of Tobu Purification Center	7,339,929	3,447,700	46.97	 Water quality index (Year/Period average) (BOD) 1.75 mg/L Water quality index (Year/Period average) (total phosphorus) 13.625 mg/L
Hitachinaka City	Ibaraki	Municipal contribution for the renovation of electric machinery / equipment in Naka-Kuji Purification Center	40,564	36,600	90.23	N/A
Mibu Town	Tochigi	Contribution for the construction of regional sewerage systems	4,271	3,900	91.31	N/A
Takasaki City	Gunma	Contribution for the construction of regional sewerage systems	138,842	138,700	99.90	N/A
Misato City	Saitama	Contribution for the construction of regional sewerage systems	67,947	67,900	99.93	N/A
Tachikawa	Talaus	Renovation of branch lines	139,678	117,600	84.19	N/A
City	токуо	Renovation of Midorikawa trunk lines	1,100,368	530,200	48.18	N/A

Others (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Other positive environmental impact	
Funabashi City	Chiba	Maintenance of an administration building and electrical installation work in the administration building at Nishiura Sewage Treatment Plant	2,087,383	937,700	44.92	N/A	
Fujisawa City	Kanagawa	Consigned design (detailed design) work for implementation of renovation of sewerage pipes	68,376	68,000	99.45	N/A	
Chigasaki City	Kanagawa	Contribution for the construction of regional sewerage systems	100,828	92,000	91.24	N/A	
Toyama City	Toyama	Renovation and seismic retrofitting of building facilities of the main administration building in the city's treatment plant	375,589	105,991	28.22	N/A	
Fukui City	Fukui	Contribution for the construction of regional sewerage systems	48,838	48,700	99.72	N/A	
Nagano City	Nagano	Contribution for the construction of regional sewerage systems	503,775	503,500	99.95	N/A	
Matsumoto City	Nagano	Decarbonization projects (replace existing lights with LEDs)	15,924	15,000	94.20	N/A	
		Contribution for the construction of regional sewerage systems	of regional sewerage systems 7,886 6,900 87.50	N/A			
Okazaki City	Aichi	Contribution for the construction of regional sewerage systems	196,700	196,600	99.95	N/A	
Ikeda City	Osaka	Contribution for the construction of regional sewerage systems in Harada treatment area	14,150	14,000	98.94	N/A	
Higashi- osaka City	Osaka	Contribution to the construction of regional sewerage systems in the southern part of Neyagawa	535,408	532,900	99.53	N/A	
Himeji City	Hyogo	Contribution for the construction of regional sewerage systems on the Ibo River operated by Hyogo Prefecture	35,769	35,700	99.81	N/A	

Others (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Other positive environmental impact
Nishinomiya City	Hyogo	Contribution for the maintenance of regional sewerage systems	155,761	39,272	25.21	N/A
Kakogawa City	Hyogo	Contribution for the construction of regional sewerage systems	242,562	238,700	98.41	N/A
Yamato- takada City	Nara	Contribution for the construction of regional sewerage systems	17,693	17,600	99.47	N/A
Hiroshima City	Hiroshima	Renewal of aging pipes, etc.	2,017,300	1,034,900	51.30	 Water quality index (Year/Period average) (BOD) 14.8 mg/L Water quality index (Year/Period average) (total phosphorus) 5.3 mg/L Sludge recycling rate: 100% (conversion to cement raw materials) Carbonization of sewage sludge for effective use as fuel in thermal power plants GHG emissions from sewage treatment in FY2022: Down by 35.6% from the base year (FY2013) Digestion gas generated in the sewage sludge treatment process will be all used effectively through Digestion Gas Power Generation Project
Kure City	Hiroshima	Design work for the renewal of blower facilities at Hiro Purification Center, etc.	281,469	133,814	47.54	N/A
Fukuyama City	Hiroshima	Seismic retrofitting and life extension work for rainwater facilities, etc.	282,633	243,007	85.98	N/A
lwakuni City	Yamaguchi	Contribution for the construction of regional sewerage systems	5,106	5,100	99.88	N/A
Tokushima City	Tokushima	Contribution for administrative costs and other costs for the construction of government buildings in the sewerage project	801,972	801,931	99.99	N/A
		Contribution for the construction of regional sewerage systems	1,658	1,600	96.50	N/A
Ashiya Town	Fukuoka	Renovation of the exterior of the water treatment facilities and administration building of the purification center	567,662	170,100	29.97	 Water quality index (Year/Period average) (BOD): 1.4 mg/L Water quality index (year/period average) (total phosphorus): 1.84 mg/L Sludge recycling rate: 100% (used as raw material for cement)

Others (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount / Total Project Cost (%)	Other positive environmental impact
Kagoshima City	Kagoshima	Renovation and renewal of aging facilities and pipelines	1,386,329	871,000	62.83	N/A
Total Amount of Others (Renewal) (36 projects)		17,676,106	10,047,275			

* Total Project Cost and JFM Loan Amount that overlap with other projects are excluded from the Total Amount

Case Study 1: Miyazaki City Miyazaki Sewage Treatment Plant Egg-shaped Digester Agitator Renovation Project

Miyazaki Sewage Treatment Plant No.2 egg-shaped Digester



Project Overview (Project Period: FY2023 - FY2024 (tentative))

Total Project Cost : JPY 1,002 million - of which JFM funds: JPY 246 million (Apr. 2023 – Mar. 2024)

- Opened in May 1978, Miyazaki Sewage Treatment Plant is one of the largest public sewage treatment plants in the city with daily capacity of 94,100m³.
- There have been some cases of failure in the agitator of No.2 egg-shaped Digester after more than 20 years since it was installed in 2000.
- The City addresses these failures by working on renovation under the "Sewerage Stock Management Project", adopting energy-saving / compact design.

Highlights Environmental impacts expected from renovation of the agitator and efficient use of sewage resources and energy

- The agitator of the egg-shaped digester was changed to impeller-type with smaller motor output from draft tube-type, achieving ~83% reduction in annual electricity consumption from 193,000 kWh to 32,000 kWh.
- Annual greenhouse gas emissions are estimated to decrease by ~65t-CO₂.
- Digestion gas generated at the egg-shaped digester is partially sold to power producers to be used for power generation, and sewage sludge is reused as dry fertilizer, contributing to realization of a recycling-based society.







<Reference> Miyazaki City, Miyazaki



Overview

- Miyazaki City is blessed with warm climate and affluent nature represented by blue ocean, sky and seasonally blooming trees and flowers, and produces good quality seafood and mountain products.
- Well-known as a training camp site for professional baseball, football, etc., the City has a very comfortable living environment with good access to relaxation / healthcare opportunities such as marine sports, trekking and golf.
- One of the popular spots in the City is Aoshima Island with a circumference of 1.5 kilometers, where toursts can enjoy a panoramic view of the Pacific Ocean with blue sky. Aoshima Shrine placed at the center of the island is considered as a matchmaking blessings.
- Having commemorated its 100th anniversary of being inaugurated as a municipality on 1 April, 2024, Miyazaki City is implementing measures to mark the first step toward community development for the next 100 years. It aims to become a city that is loved by its citizens, where they can feel happiness and prosperity.

DATA

Population	401,339 (as of 1 October, 2020)
Area	643.57km (as of 1 April, 2024)
Sewerage Coverage	91.5% (as of 31 March, 2023)
City Budget	JPY 184.0 billion (FY2024 General Account Initial Budget)

Demographic Trend



*Source: National Institute of Population and Social Security Research, Regional Population Projections for Japan (2023)





Pro baseball training camp

Aoshima Shrine

Case Study 2: Iwaki City Sewage Sludge Utilization Project



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<Reference> Iwaki City, Fukushima



Overview

- Located on the southeast edge of Fukushima Prefecture, Iwaki City covers a vast area sharing a border with Ibaraki Prefecture. As a coastal region facing the Pacific Ocean, the city has a very warm climate with relatively small temperature difference. It was established in October 1966 when 14 municipalities merged.
- After the merger, Iwaki City has actively developed production infrastructure such as high-speed road network and industrial park, and also invited manufacturers to build their plants in the city. It is now one of the largest industrial city in the Tohoku region with more than 1 trillion yen in the annual shipment value of manufactured products, etc. The number of employees in the manufacturing sector now accounts for approximately one-quarter of the city's working population.
- The sewerage project was initiated by the former Taira City in 1958, prior to the merger, and became the lwaki City Public Sewerage Project in 1966 following the merger. The city is promoting the project to realize stable and sustainable operation.

DATA

Population	332,931 (as of 1 October, 2020)
Area	1,232.51km (as of 1 April, 2024)
Sewerage Coverage	54.9% (as of 31 March, 2023)
City Budget	JPY 144.6 billion (FY2024 General Account Initial Budget)

Demographic Trend (Fukushima Hamadori Area)



*Source: National Institute of Population and Social Security Research, Regional Population Projections for Japan (2023)

*Data covered population of 13 municipalities in Fukushima's Hamadori Area (lwaki City, Soma City, Minamisoma City, Hirono Town, Naraha Town, Tomioka Town, Kawauchi Village, Okuma Town, Futaba Town, Namie Town, Katsurao Village, Shinchi Town and litate Village)





Shioyasaki Lighthouse Catch of bonito (Onahama Port)

Hawaiians (Hula Girls)