



# JFM Green Bond Impact Report 2022

**JFM**

Japan Finance Organization for Municipalities

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# About This Report

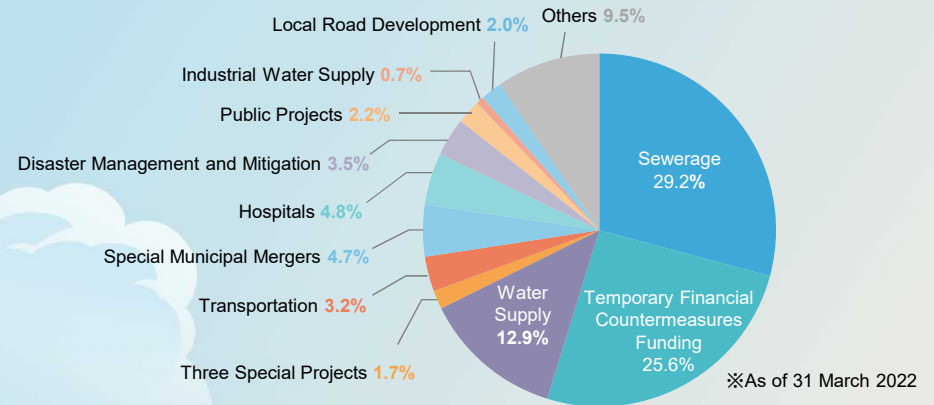
Japan Finance Organization for Municipalities (JFM) provides loans to projects operated by local governments. As of 31 March 2022, total outstanding loans stood JPY 23.5508 tn, of which JPY 6.8695 tn was for sewerage, accounting for 29.2% of the total amount.

JFM issued its third green bond in January 2022 to finance the Japanese local governments' sewerage projects and fully allocated the net proceeds by 30 March 2022 after issuance.

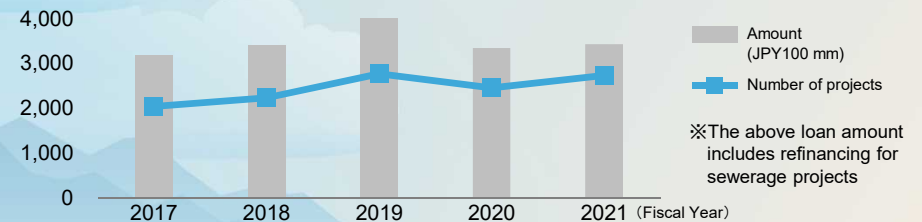
JFM conducted a survey to 70 local governments selected by JFM's Green Bond Working Group where loans were made between 3 February 2022 and 30 March 2022 and of which the loan amount for the project was JPY 300 mm or higher in principle and obtained effective response from 62 local governments. (Total loan amount: approximately JPY 95 bn, effective response rate: 89%)

In this report, JFM put together the overview of each sewerage projects 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 projects.

## JFM's Loan Portfolio by Project Types



## The amount and number of JFM loans made for sewerage projects



Amount of electricity saved (kWh)

0.5mm

Volume of treated water (m<sup>3</sup>)

4.6bn

Population of the treated area (thousand)

18,935

Total extension of pipes (km)

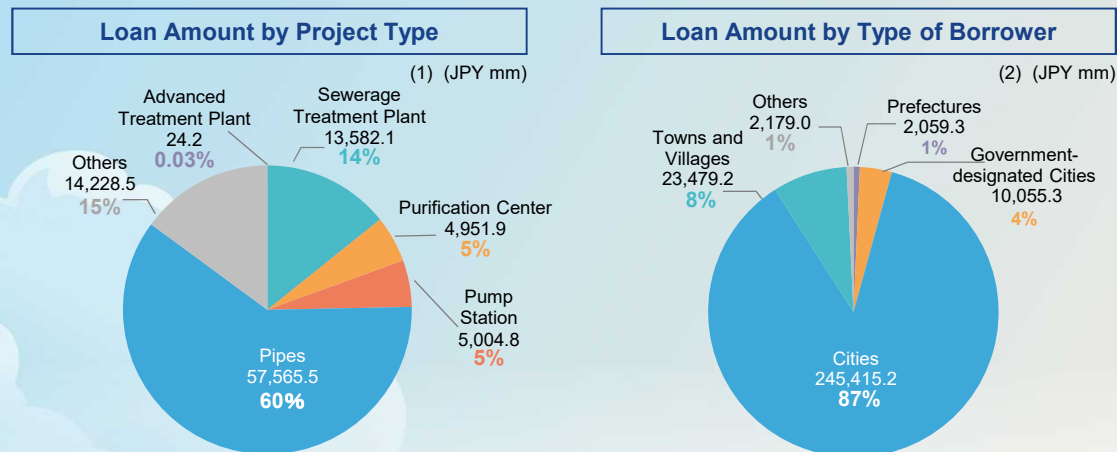
319.5

※The above data is calculated based on the survey

# 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 ~ 400 bn annually.
- On the back of the growing global concerns on SDGs, JFM issued USD 750 mm green bond in January 2022, 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).

- The breakdown of the sewerage projects related loans by JFM FY2021 is as follows



- (1) Breakdown of green bond eligible projects from 3 February 2022 to 30 March 2022 (approximately JPY 95 bn)  
 (2) Breakdown of all the sewerage projects related loans in FY2021  
 (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 3 February to 30 March 2022 were targeted for the survey, and the refinancing rate for sewerage projects was 0%. Moreover, the following effects were observed:

## Summary of Terms - Green Bond

Bond Ratings	A1 / A+ (Moody's / S&P)
Tenor	3-year
Issue Amount	USD 750 mm
Pricing Date	19 January 2022
Issue Date	27 January 2022
Maturity Date	27 January 2025
Coupon	1.500%
Second-party Opinion Provider	Moody's
Sustainability Quality Score	SQS2 (Very good)

## Summary of Survey Results

Total extension of pipes (km)	Covered area population	Water management capacity (m <sup>3</sup> )	Amount of electricity saved (kWh)
319.5	18,935,043	4,653,649,358	577,278

※The number of the survey sample for local governments was 70, and 62 returned effective response (89%)

### ※Summary Methodology

- Total extension of pipes is addition of new constructed pipes
- Covered area population is addition of new pipes, new/renewal of sewerage related facilities
- Water management capacity is addition of annual planned/ actual water management capacity in sewerage related facilities
- Amount of electricity saved is addition of monthly planned/actual electricity saved

## 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.

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 natural disasters and JFM contributes to a sustainable development of the system 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.

**Japan Finance Organization for Municipalities  
President and CEO  
SATO Fumitoshi**



# JFM SDGs Related Lending Operations

## Sewerage

### Purification Center



## Water Supply and Industrial Water Supply

### Water Supply Plant



## Transportation

### Tramway



## Hospitals and Elderly Care Services

### Hospital



## Disaster Management and Mitigation

### Tsunami Evacuation Tower



## Approach to Sustainability







- Local Governance in Japan and JFM's contribution
  - \* SDGs Mapping-Fund Usage by JFM, 31.6% (As of 31 March 2019) 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 are in line with sewage drainage standards set by Japanese law including: <ul style="list-style-type: none"> <li>Sewerage Management Related Facilities</li> <li>Facility/Equipment</li> <li>Pipes</li> </ul>	Pollution Prevention and Control  Water Resource Conservation  Energy use of sewage sludge, sewerage sludge recycle	     

## Alignment with the Green Bond Principle, 2018 (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 the 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 on 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

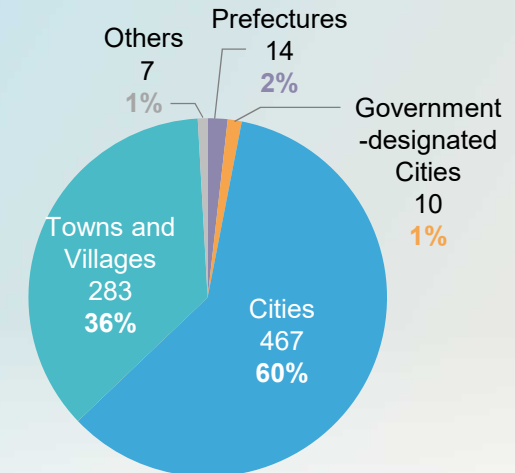


## (i) Amount of Loan to Sewerage Projects

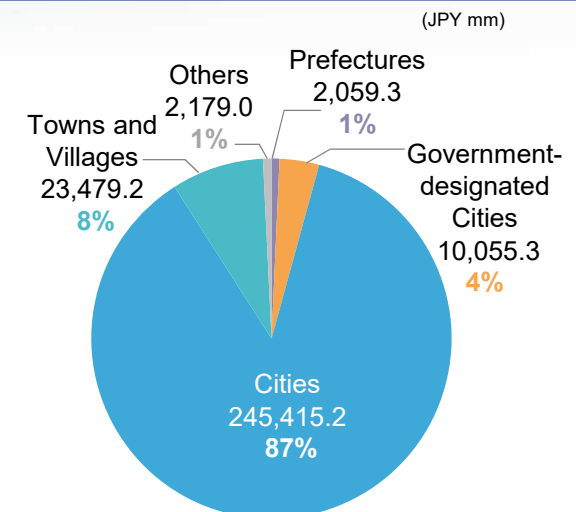
	Prefectures	Designated Cities	Cities	Towns and Villages	Others	Total
Number of Local Governments	14	10	467	283	7	781
Number of Loans	15	18	1,794	625	19	2,471
Loan Amount (JPY million)	2,059.3	10,055.3	245,415.2	23,479.2	2,179.0	283,188.0

	JPY 2 bn or over	JPY 1 bn or over	JPY 500 mm or over	JPY 100 mm or over	Below JPY 100 mm	Total
Number of Loans by Loan Amount	4	30	97	555	1,785	2,471

### Number of Local Governments by Type of Borrower



### Loan Amount by Type of Borrower



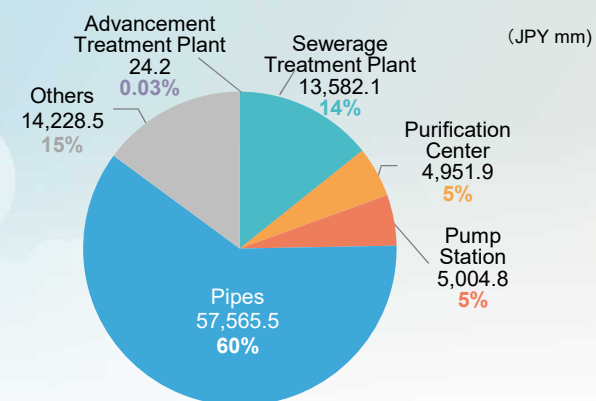
- The total loan amount to sewerage projects for fiscal year 2021 (1 April 2021 to 31 March 2022) (excluding refinance) was JPY 283.2 bn.
- The number of local governments was 781, and the number of loans was 2,471. In terms of the loan amount by types of borrowers, cities were the highest with 87%, followed by towns and villages with 8%, then government-designated cities with 4%.
- In terms of the number of loans by loan amount, JPY 2 bn or over was 4, JPY 1 bn or over was 30, JPY 500 mm or over was 97, JPY 100 mm or over was 555 and below JPY 100 mm was 1,785.

## (ii) Breakdown of Green Bond Effective Portfolio

	Sewerage Treatment Plant	Advanced Treatment Plant	Purification Center	Pump Station	Pipes	Others	Total
Number of Projects by Type	52	1	19	36	110	41	259
Loan Amount by Type (JPY million)	13,582.1	24.2	4,951.9	5,004.8	57,565.5	14,228.5	95,357.0

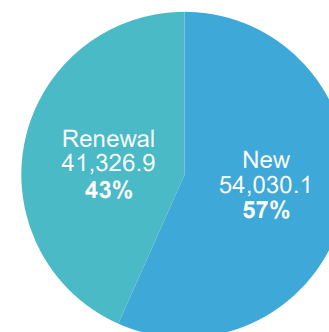
	New	Renewal	Total
Number of Projects by Type	111	148	259
Loan Amount by Type (JPY million)	54,030.1	41,326.9	95,357.0

Loan Amount by Project Type



※ Does not add up to 100 due to rounding off

New/Renewal percentage



- The Green Bond Working Group has selected 70 local governments which JFM financed for eligible sewerage projects between 3 February 2022 and 30 March 2022 with the loan amount over JPY 300 mm in principle and conducted a survey for the purpose of this green bond reporting. The working group obtained effective response from 62 local governments (effective response rate:89%) and a total of approximately JPY 95 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 sewerage treatment plant with 14%, then purification center and pump station with 5%.
- Additionally, 57% of the loan amount eligible for green bond was financed to new facilities and 43% was for renewal.

## (iii) Project by Project Reporting : Sewerage Treatment Plant 1

### Sewerage Treatment Plant (New)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (thousand JPY)	JFM Loan Amount (thousand JPY)	JFM Loan Amount/ Total Project Cost (%)	Covered Area Population	Water Management Capacity (m <sup>3</sup> )	Water Quality (BOD) (Year/Period Average) (mg/L)	Water Quality (phosphorus) (Year/Period Average) (mg/L)	Other positive environmental impact
Utsunomiya City	Tochigi	Install additional facilities to treat more sewerage as the number of people treated in the area increases	152,066	62,000	40.77	469,342 →470,987	82,917,793 →88,375,852 (annual total)	13.0	2.0	<ul style="list-style-type: none"> <li>Improve living environment by proper treatment of sewerage due to increase in treated water volume</li> </ul>
Fujisawa City	Kanagawa	Construction of a rainwater pool at Tsujido Purification Center	605,349	426,400	70.44	209,250	11,300 (max per day)	15.0	N/A	<ul style="list-style-type: none"> <li>Reduction of pollutant load of effluents by temporarily storing initial sewerage that flows into treatment plants in rainy weather and applying advanced treatment on sunny days (planned reduction of 89 tons per year)</li> </ul>
Nagano City	Nagano	Construction of septic tanks	15,367	8,600	55.96	6,414	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Improvement of water cleansing ratio</li> </ul>
Toyohashi City (1)	Aichi	Construction of mainline of wastewater pipe and pumping system to integrate sewage treated at the aging Noda Sewage Plant into the Nakajima Sewage Plant	632,214	390,500	61.77	264,099	28,394,823 (annual total)	15.0	1.8	<ul style="list-style-type: none"> <li>Decrease in electricity usage 972,281 kWh to 964,602 kWh * Monthly average</li> <li>Reduce loads at the Noda Sewerage Treatment Plant to cope with the aging of the facility and to make it earthquake-resistant</li> <li>Sludge recycling rate: 100% (actual)</li> <li>Sludge energy conversion (Biogas power generation, carbonized fuel)</li> </ul>
Toyohashi City (2)			309,500	154,750	50.00					
Toyohashi City (3)			665,050	339,800	51.09					
Toyohashi City (4)			18,480	9,240	50.00					
Hatsukaichi City (1)	Hiroshima	Expansion of sewerage treatment facilities at Hatsukaichi Purification Center	347,000	156,200	45.01	55,921 →57,560	5,451,532 →5,611,312 (annual total)	15.0	2.0	<ul style="list-style-type: none"> <li>Improving public health and preserving water quality in public waters by responding to the increase in treated water volume associated with the expansion of treated areas</li> </ul>
Hatsukaichi City (2)			149,300	8,900	5.96					
Hatsukaichi City (3)			9,500	4,200	44.21					
Niihama City	Ehime	Build new facilities for joint treatment at Niihama City Sewerage Treatment Plant to respond to the aging of Niihama City Sanitation Center, which treats human waste and purification tank sludge	2,851,385	618,800	21.70	74,626 →87,510	11,475,632 →14,067,100 (annual total)	15.0	3.0	<ul style="list-style-type: none"> <li>Large reduction in electricity consumption due to abolition of Niihama City Sanitation Center 632,397 kWh (before implementation) →500,000kWh (after implementation) * Monthly average</li> <li>Sludge recycling rate (cement recycling) 92.9% (before implementation) → 100% (planned after implementation)</li> </ul>
Nagasaki City	Nagasaki	Expansion of sewerage treatment facilities at Western Sewerage Treatment Plant (the receiving side) associated with the integration of sewerage treatment plants in response to aging of facilities	426,229	147,744	34.66	163,403 →229,510	82,200 →92,400 (max per day)	N/A	N/A	<ul style="list-style-type: none"> <li>Reduce electricity consumption by streamlining sludge treatment through integration and new facilities or equipment</li> </ul>
Total Amount of Sewerage Treatment Plant (New) (12 projects)			6,181,440	2,327,134						

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

## (iii) Project by Project Reporting : Sewerage Treatment Plant 2

### Sewerage Treatment Plant (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (thousand JPY)	JFM Loan Amount (thousand JPY)	JFM Loan Amount/ Total Project Cost (%)	Covered Area Population	Water Management Capacity (m <sup>3</sup> )	BOD Planned [Year/Period Average] (mg/L)	BOD Actual [Maximum monthly results] (mg/L) after treatment	Phosphorus (Year/Period Average) (mg/L)	Phosphorus Actual [Maximum monthly results] (mg/L) after treatment	Other positive environmental impact
Hakodate City	Hokkaido	Entrustment of market price investigation service about public sewerage equipment related with treatment plant design cost	258	200	77.52	121,511	N/A	N/A	N/A	N/A	N/A	N/A
Hachinohe City	Aomori	Expansion of water treatment facilities	883,900	883,900	100.00	146,832 →148,317	16,735,691 →17,124,475 (annual total)	15.0	N/A	N/A	N/A	N/A
Oshu City	Iwate	Renovation of aging electrical and mechanical equipment	87,441	43,400	49.63	15,268	N/A	N/A	N/A	N/A	N/A	N/A
Iwaki City (1)	Fukushima	Renovation and renewal of aging treatment plants	2,197,057	1,049,700	47.78	171,691 →178,800	24,521,926 →25,877,770 (annual total)	15.0	3.0	N/A	1.8→0.79 improved	N/A
Iwaki City (2)			1,657,755	847,900	51.15							
Mito City	Ibaraki	Renovation of electric facilities at the sewerage treatment plant and pumping station	1,298,700	642,000	49.43	216,056	19,985,431 (annual total)	15.0	5.2	N/A	0.76	N/A
Utsunomiya	Tochigi	Renewal of equipment that has exceeded its durable life	261,969	106,000	40.46	469,342 →470,987	82,917,793 →88,375,852 (annual total)	13.0	5.9→5.3 improved	2.0	2.3→2.2 improved	<ul style="list-style-type: none"> <li>Improvement of living conditions through proper sewerage treatment</li> </ul>
Funabashi City	Chiba	Electrical equipment construction and B1 fine mesh screen construction for Nishiura Sewerage Treatment Plant	412,848	193,680	46.91	110,700	305,020 (monthly average)	10.0	1.2→1.1 improved	1.5	0.87→0.54 improved	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 904,508kWh → 887,894kWh</li> </ul>
Fujisawa City (1)	Kanagawa	Renewal of speed control equipment and reconstruction of returning sludge pumps (4 units) due to aging of the fourth line of water treatment at Tsujido Purification Center	144,584	144,500	99.94	209,250	35,296,170 (annual total)	15.0	8.9	N/A	2.3	N/A
Fujisawa City (2)		Renewal of aging mechanical / electrical equipment and the final settling tank of the 1st series of water treatment at the Oshimizu Purification Center	318,039	170,300	53.55	183,630	220,250,013 (annual total)	15.0	11.0	N/A	2.4	N/A
Yamato City	Kanagawa	Renewal of settling basin, instrumentation equipment, drains and blowers	614,684	289,500	47.10	230,792	N/A	15.0	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Prevent the suspension of processing functions from failures by replacement of aging equipment</li> <li>Sludge recycling rate: 100% (converted to cement)</li> </ul>
Toyama City	Toyama	Detailed design to renovate water treatment facilities of Hamakurosaki Purification Center	51,194	32,983	64.43	258,410	42,838,444 (annual total)	N/A	6.7→3.6 improved	N/A	1.6	<ul style="list-style-type: none"> <li>Sludge recycling rate: 88.6% (Compounding fuel and fertilizer)</li> </ul>

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

## (iii) Project by Project Reporting : Sewerage Treatment Plant 3

### Sewerage Treatment Plant (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (thousand JPY)	JFM Loan Amount (thousand JPY)	JFM Loan Amount/ Total Project Cost (%)	Covered Area Population	Water Management Capacity (m)	BOD Planned [Year/Period Average] (mg/L)	BOD Actual [Maximum monthly results] (mg/L) after treatment	Phosphorus (Year/Period Average) (mg/L)	Phosphorus Actual [Maximum monthly results] (mg/L) after treatment	Other positive environmental impact
Uchinada Town	Ishikawa	Improve earthquake resistance and renew equipment of reaction tank facilities	607,819	340,800	56.07	26,138 →27,100	2,573,796 →2,754,228 (annual total)	15.0	2.7	N/A	N/A	N/A
Nagano City (1)	Nagano	Renovation and renewal of aging East Terminal Sewerage Treatment Facilities	391,840	168,800	43.08	145,984	21,010,011 (annual total)	1.4	1.4→0.75 improved	N/A	12.0→9.95 improved	<ul style="list-style-type: none"> <li>Sludge recycling rate: 100% (raw cement materials)</li> </ul>
Nagano City (2)		Renovation and renewal of mechanical and electrical equipment at the Kinasa Purification Center	215,650	104,254	48.34	448	57,853 →60,846 (annual total)	15.0	2.6→2.5 improved	N/A	1.3→0.8 improved	
Nagano City (3)		Renovation and renewal of mechanical and electrical facilities at Shinshu-Shinmachi Purification Center	12,188	5,514	45.24	1,478	154,578 (annual total)	15.0	2.2→1.6 improved	N/A	1.2→0.46 improved	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 8,797kWh → 8,140kWh</li> </ul>
Nagano City (4)		Renewal of pumping equipment at manhole pump station in Hirashigaki district	25,214	10,983	43.56	1,160	46,842 (annual total)	20.0	7.0→3.9 improved	N/A	3.1	N/A
Nagano City (5)		Renewal of manhole pump station in Asakawa North District	11,594	5,417	46.72	440	20,709 →25,548 (annual total)	20.0	6.6→2.6 improved	N/A	10.0→2.2 improved	N/A
Matsumoto City (1)	Nagano	Renewal of Miyabuchi Purification Center's low-level 2 <sup>nd</sup> system's primary and final settings, in-house power generation, and earthquake resistance of low-level 1 <sup>st</sup> system settling basin	276,400	109,400	39.58	125,739	22,199,364 (annual total)	15.0	5.4→5.1 improved	N/A	4.3	<ul style="list-style-type: none"> <li>Stable sewerage treatment can be performed even in natural disaster event such as earthquakes by updating aging facilities and constructing earthquake-resistant facilities</li> </ul>
Matsumoto City (2)		Work on detailed design and construct a more earthquake resistant facility for Ryoshima Purification Center sludge equipment, chlorine mixing pond and discharge culvert	25,450	10,500	41.26	75,385	10,236,444 (annual total)	15.0	4.2	N/A	0.7→0.6 improved	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 323,356kWh → 307,607kWh</li> </ul>
Matsumoto City (3)			40,280	23,500	58.34							
Gifu City (1)	Gifu	Renewal of mechanical / electrical equipment	28,871	24,800	85.90	379,200	45,428,707 (annual total)	15.0	5.9→3.0 improved	1.5	0.8→0.7 improved	<ul style="list-style-type: none"> <li>Electricity consumption (annual total) 20,423,858kWh → 20,348,585kWh</li> </ul>
Gifu City (2)			42,020	18,900	44.98							
Himeji City (1)	Hyogo	Renewal of aging Chubu Treatment Plant	344,325	344,322	100.00	479,873	66,009,988 →66,488,383 (annual total)	15.0	5.3→3.9 improved	3.0	1.1→0.91 improved	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 1,103,216kWh → 1,079,765kWh</li> </ul>
Himeji City (2)			626,560	626,456	99.98							
Himeji City (3)			2,076,955	1,028,300	49.51							

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

## (iii) Project by Project Reporting : Sewerage Treatment Plant 4

### Sewerage Treatment Plant (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (thousand JPY)	JFM Loan Amount (thousand JPY)	JFM Loan Amount/ Total Project Cost (%)	Covered Area Population	Water Management Capacity (m)	BOD Planned [Year/Period Average] (mg/L)	BOD Actual [Maximum monthly results] (mg/L) after treatment	Phosphorus (Year/Period Average) (mg/L)	Phosphorus Actual [Maximum monthly results] (mg/L) after treatment	Other positive environmental impact
Akashi City	Hyogo	Renewal of monitoring and control systems	860,909	436,400	50.69	32,670	277,943 (monthly average)	15.0	7.9	N/A	0.9	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 146,010kWh → 136,739kWh</li> <li>Contributing to the conservation of water quality in public water areas by performing proper sewerage treatment efficiently by updating aging equipment</li> </ul>
Wakayama City (1)	Wakayama	Renovation of sewerage treatment plants and sewerage pump facilities that have exceeded durable life	25,000	11,300	45.20	21,085	562,960 (monthly average)	15.0	5.5→1.6 improved	0.5	0.56→0.43 improved	N/A
Wakayama City (2)			7,000	3,200	45.71							
Kure City	Hiroshima	Construction of the monitoring control panel and settling tank facility at the purification center	824,077	385,948	46.83	187,049	25,058,654 →25,311,507 (annual total)	15.0	1.0→0.7 improved	3.0	0.9→0.7 improved	<ul style="list-style-type: none"> <li>Odor control from sedimentation pond equipment</li> <li>Electricity usage (monthly average) 1,449,699kWh → 1,440,479kWh</li> </ul>
Hatsukaichi City (1)	Hiroshima	Renewal of sewerage treatment facilities (total phosphorus/total nitrogen measuring instruments) of the aging Hatsukaichi, Ohno, Yuwa, and Yoshiwa Purification Centers	570	200	35.09	68,999 →72,814	6,917,810 →7,300,300 (annual total)	15.0	10.5	2.0	1.8	<ul style="list-style-type: none"> <li>Improvement of public health and preservation of water quality in public waters</li> </ul>
Hatsukaichi City (2)			37,650	30,700	81.54							
Takamatsu City	Kagawa	Rebuilding the air conditioning system at the East Sewerage Treatment Plant	997,997	404,400	40.52	267,444 →288,680	35,952,500 (annual total)	2.4	4.4	0.79	0.79	<ul style="list-style-type: none"> <li>Reduction in CO2 emissions by replacing heavy oil boiler models with air conditioners that comply with the Green Purchasing Law</li> <li>Sludge recycling rate: 100% (cement and fertilizer)</li> <li>Solar power</li> <li>Effective use of treated water</li> </ul>
Marugame City	Kagawa	Construction of new purification center to respond to the aging and improve earthquake resistance	1,171,816	538,400	45.95	42,300	7,678,000 (annual total)	15.0	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Effective use of treated water in treatment plants</li> <li>Reduction of greenhouse gas emissions by reducing the scale of new facilities and introducing energy-saving equipment</li> </ul>
Imabari City (1)	Ehime	Expansion of Onishi Water Treatment Center to respond to the increase in treated water volume	139,602	65,090	46.63	3,495 →6,140	311,921 →806,400 (annual total)	15.0	N/A	3.0	N/A	N/A
Imabari City (2)		Development of drainage facilities when integrating agricultural community drainage equipment (Setozaki Treatment Area) with specified environmental conservation public sewer pipes (Iguchi Treatment Area)	2,400	1,150	47.92	1,122 →1,870	226,800 (annual total)	15.0	N/A	3.0	N/A	<ul style="list-style-type: none"> <li>Reduction in electricity use at disposal sites through integration of facilities</li> </ul>
Imabari City (3)		Renewal of water treatment facilities at the agricultural community drainage treatment plant (Kyu)	15,040	14,300	95.08	791	63,592 (annual total)	20.0	1.7	N/A	3.2→2.93 improved	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 8,719kWh → 8,595kWh</li> </ul>
Imabari City (4)		Renewal of water treatment facilities at the agricultural community drainage treatment plant (Munakata)	35,585	33,600	94.42	269	23,306 (annual total)	20.0	0.8→0 improved	N/A	2.62→2.49 improved	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 5,650kWh → 5,580kWh</li> </ul>

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

## (iii) Project by Project Reporting : Sewerage Treatment Plant 5

### Sewerage Treatment Plant (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (thousand JPY)	JFM Loan Amount (thousand JPY)	JFM Loan Amount/ Total Project Cost (%)	Covered Area Population	Water Management Capacity (m)	BOD Planned [Year/Period Average] (mg/L)	BOD Actual [Maximum monthly results] (mg/L) after treatment	Phosphorus (Year/Period Average) (mg/L)	Phosphorus Actual [Maximum monthly results] (mg/L) after treatment	Other positive environmental impact
Sasebo City	Nagasaki	Renewal of aging equipment and power generation facilities that have exceeded their durable life	2,379,899	2,093,700	87.97	145,475	12,598,800 →12,879,924 (annual total)	15.0	2.0	N/A	1.69	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 400.807kWh → 386.755kWh</li> <li>Gas generated during the sludge treatment process is used as fuel for power generators</li> </ul>
Yatsushiro City	Kumamoto	Replacing aging equipment with new ones at the water treatment center	25,505	10,600	41.56	45,959 →46,139	N/A	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Introduce equipment that uses less electricity</li> </ul>
Total Amount of Sewerage Treatment Plants (Renewal) (40 projects)			19,176,645	11,254,997								

### (iii) Project by Project Reporting : Advanced Treatment Plant

#### Advanced Treatment Plant (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (thousand JPY)	JFM Loan Amount (thousand JPY)	JFM Loan Amount/ Total Project Cost (%)	Covered Area Population	Water Management Capacity (㎡)	BOD Planned [Year/Period Average] (mg/L)	BOD Actual [Maximum monthly results] (mg/L) after treatment	Phosphorus (Year/Period Average) (mg/L)	Phosphorus Actual [Maximum monthly results] (mg/L) after treatment	Other positive environmental impact
Funabashi City	Chiba	Mechanical and electric construction for B1 fine screen at Nishiura Sewerage Treatment Plant	51,606	24,210	46.91	110,700	1,603,756 →1,690,013 (monthly average)	10.0	1.2→1.1 improved	1.5	0.87→0.54 improved	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 904,508kWh → 887,894kWh</li> </ul>
Total Amount of Advanced Treatment Plant (Renewal) (1 project)			51,606	24,210								



## (iii) Project by Project Reporting : Purification Center 1

### Purification Center (New)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (thousand JPY)	JFM Loan Amount (thousand JPY)	JFM Loan Amount/ Total Project Cost (%)	Covered Area Population	Water Management Capacity (m <sup>3</sup> )	BOD Planned [Year/Period Average] (mg/L)	Phosphorus (Year/Period Average) (mg/L)	Other positive environmental impact
Matsumoto City	Nagano	Detailed design work for construction of sludge digestion tank at Ryoshima Purification Center	18,350	17,400	94.82	75,385	10,236,444 (annual total)	N/A	N/A	<ul style="list-style-type: none"> <li>Sludge recycling rate: 99.9% (use in digestion gas and use of dehydrated cake as raw material for cement)</li> <li>Electricity usage (monthly average) 323,356kWh → 307,607kWh</li> </ul>
Hatsukaichi City (1)	Hiroshima	Establishment of sludge treatment related facilities (gravitational concentration) at Ohno Purification Center to cope with the increase in sludge volume caused by the expansion of treatment areas	39,000	17,500	44.87	13,857 →14,320	1,284,576 →1,327,498 (annual total)	N/A	N/A	<ul style="list-style-type: none"> <li>Sludge recycling rate: 100% (composting)</li> <li>Improving public health, preserving water quality in public waters</li> </ul>
Hatsukaichi City (2)			139,100	11,100	7.98					
Total Amount of Purification Center (New) (3 projects)			196,450	46,000						

### Purification Center (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (thousand JPY)	JFM Loan Amount (thousand JPY)	JFM Loan Amount/ Total Project Cost (%)	Covered Area Population	Water Management Capacity (m <sup>3</sup> )	BOD Planned [Year/Period Average] (mg/L)	BOD Actual [Maximum monthly results] (mg/L) after treatment	Phosphorus (Year/Period Average) (mg/L)	Phosphorus Actual [Maximum monthly results] (mg/L) after treatment	Other positive environmental impact
Sapporo City	Hokkaido	Renovation of sludge incineration facilities and introduction of waste heat generation equipment	1,519,500	502,641	33.08	N/A	N/A	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 274,044kWh → 127,783kWh</li> <li>Greenhouse gas (CO<sub>2</sub>) emissions (monthly average) 196t → 115t</li> <li>Sludge recycling rate: 100% (backfilling materials and cement materials for civil engineering work)</li> <li>Sludge energy conversion (incineration waste heat generation (total output 400 kW))</li> </ul>
Asahikawa City	Hokkaido	The aging No. 1 sludge incinerator, a bubble-type fluidized bed furnace, has been downsized (from 80 t/day to 60 t/day) for expected reduction in sludge volume, and replaced with a supercharged incinerator that reduces greenhouse gas emissions	2,502,391	1,062,000	42.44	312,600	49,932,380 →51,531,342 (annual total)	15.0	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 1,193,407kWh → 1,160,596kWh</li> <li>Greenhouse gas (CO<sub>2</sub>) emissions (monthly average) 1,350.40t → 686.25t</li> <li>Sludge recycling rate 48.4% to 50% (converted to cement (incinerated ash))</li> <li>Sewerage treatment water used for snowmelt</li> <li>Digestion gas generated from sludge used as an auxiliary fuel for incineration</li> <li>Electricity consumption by the entire incineration system can be reduced by using sludge incineration heat (approximately 31.2%)</li> </ul>

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

## (iii) Project by Project Reporting : Purification Center 2

### Purification Center (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (thousand JPY)	JFM Loan Amount (thousand JPY)	JFM Loan Amount/ Total Project Cost (%)	Covered Area Population	Water Management Capacity (m)	BOD Planned [Year/Period Average] (mg/L)	BOD Actual [Maximum monthly results] (mg/L) after treatment	Phosphorus (Year/Period Average) (mg/L)	Phosphorus Actual [Maximum monthly results] (mg/L) after treatment	Other positive environmental impact
Funabashi City	Chiba	Construction of digestion tank for digestion gas power generation project at Takase Sewerage Treatment Plant	188,576	81,500	43.22	251,800	2,637,280 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Sludge recycling rate: 100% (converted to cement)</li> <li>Energy conversion from sludge (digestion gas power generation)</li> </ul>
Fujisawa City	Kanagawa	Renewal of sludge treatment facility at Tsujido Purification Center	11,659	11,400	97.78	209,250	35,296,170 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Sludge recycling rate: 100% (construction aggregates)</li> </ul>
Yamato City	Kanagawa	Renovation and renewal of dewatering and deodorization facilities, improvement of earthquake resistance and strengthening of sludge building	1,513,216	712,686	47.10	230,792	N/A	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Sludge recycling rate: 100% (converted to cement)</li> </ul>
Toyama City	Toyama	Renewal of excess sludge pullout valves at the Osawano Purification Center	4,455	4,232	94.99	17,221	2,007,444 (annual total)	N/A	9.8→9.6 improved	N/A	2.9→1.8 improved	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 100,998kWh → 97,621kWh</li> <li>Sludge recycling rate: 100% (fertilizer conversion)</li> </ul>
Wakayama City	Wakayama	Renovation of terminal sewerage facilities that have exceeded durable life	96,900	39,600	40.87	21,085	N/A	N/A	N/A	N/A	N/A	N/A
Tottori City (1)	Tottori	Improvement of earthquake resistance and extend durable life for water treatment facilities	70,366	70,366	100.00	3,354	31,012 →32,546 (monthly average)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 23,733kWh → 21,724kWh</li> <li>Sludge recycling rate: 100% (construction materials, etc.)</li> </ul>
Tottori City (2)			74,725	74,725	100.00							
Kure City	Hiroshima	Construction of sludge facility at the purification center	574,070	307,141	53.50	187,049	25,058,654 →25,311,507 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Promotion of effective utilization of sludge by improving sludge properties after dehydration, and reduction in odors from facilities</li> <li>Electricity usage (monthly average) 1,449,699kWh → 1,440,479kWh</li> <li>Sludge recycling rate: 100% (composting and conversion to cement)</li> </ul>
Hatsukaichi City	Hiroshima	Renewal of sludge treatment related facilities (dehydrators) at the aging Hatsukaichi Purification Center	490,520	220,700	44.99	53,272 →55,921	5,296,302 →5,559,666 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Improvement of public health, and preservation of water quality in public waters</li> <li>Sludge recycling rate: 100% (composting and conversion to cement)</li> </ul>
Iwakuni City	Yamaguchi	Upgrading of sludge dehydrators at the aging Ichimonji Terminal Treatment Plant	131,760	59,450	45.12	43,295	5,486,110 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 219,496kWh → 196,769kWh</li> <li>Sludge recycling rate: 100% (composting)</li> </ul>

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

### (iii) Project by Project Reporting : Purification Center 3

#### Purification Center (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (thousand JPY)	JFM Loan Amount (thousand JPY)	JFM Loan Amount/ Total Project Cost (%)	Covered Area Population	Water Management Capacity (m <sup>3</sup> )	BOD Planned [Year/Period Average] (mg/L)	BOD Actual [Maximum monthly results] (mg/L) after treatment	Phosphorus (Year/Period Average) (mg/L)	Phosphorus Actual [Maximum monthly results] (mg/L) after treatment	Other positive environmental impact
Marugame City (1)	Kagawa	Construction of the new purification center to respond to the aging and improve earthquake resistance	1,171,816	538,400	45.95	42,300	N/A	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Reducing greenhouse gas emissions by downsizing facilities and installing energy-saving equipment</li> </ul>
Marugame City (2)			1,339,720	618,000	46.13							
Marugame City (3)			908,638	419,700	46.19							
Imabari City	Ehime	Renewal of sludge treatment facilities at Imabari Sewerage Treatment Center (Sludge concentration facilities, sludge digestion facilities, dehydrators, etc.)	409,398	183,310	44.78	74,544 →83,020	13,442,950 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Expected to reduce annual sludge generation by about 350 tons by adopting a dehydrator with lower moisture content</li> <li>Sludge recycling rate 8.13% (composting) → 38.09% (composting and conversion to cement)</li> <li>Electricity usage (monthly average) 241,745kWh → 210,300kWh</li> <li>Digestion gas power generation (electricity generation = reduction of 769,000 kwh/year)</li> </ul>
Total Amount of Purification Center (Renewal) (16 projects)			11,007,710	4,905,851								

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

## (iii) Project by Project Reporting : Pump Station 1

### Pump Station (New)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (thousand JPY)	JFM Loan Amount (thousand JPY)	JFM Loan Amount/ Total Project Cost (%)	Covered Area Population	Water Management Capacity (m <sup>3</sup> )	BOD Planned [Year/Period Average] (mg/L)	Phosphorus (Year/Period Average) (mg/L)	Other positive environmental impact
Ichikawa City (1)	Chiba	Construction of a new pumping station to respond to the reorganization of the public sewerage (rainwater) drainage area (forced drainage is used since natural drainage is difficult due to the low ground level of the target drainage area)	106,000	86,000	81.13	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Efficient removal of inland water in an area of about 70 ha where urban functions and population are concentrated</li> </ul>
Ichikawa City (2)			828,550	414,200	49.99					
Hachioji City	Tokyo	Expansion of rainwater pool (19,700 m <sup>3</sup> ) to prevent deterioration of pollution load during rainy weather caused by discharged water	1,301,685	203,100	15.60	304,853	65,967,170 (annual total)	N/A	N/A	<ul style="list-style-type: none"> <li>Contribute to the improvement of river water quality</li> </ul>
Matsusaka City	Mie	Construction of new inflow sewer pipes, machinery building, dust removal equipment, container building, machinery and electrical equipment for rainwater pumping stations	669,730	306,900	45.82	N/A	1,175,040 (max per day)	N/A	N/A	<ul style="list-style-type: none"> <li>Measures to prevent flooding of urban areas by increasing the removal of inland water</li> </ul>
Wakayama City	Wakayama	Construction of Rainwater Pumping Station to Prevent flood due to Heavy Rain	635,000	288,600	45.45	N/A	604,800 (max per day)	N/A	N/A	N/A
Hatsukaichi City	Hiroshima	New manhole pump for pumping sewerage to treatment plant, etc.	245,226	108,600	44.29	69,778	6,539,345 → 6,921,118 (annual total)	N/A	N/A	<ul style="list-style-type: none"> <li>Improve public health and preserve water quality in public waters</li> </ul>
Imabari City	Ehime	Development of a wastewater relay pumping station that is necessary for sewerage development to the Imabari sewerage treatment area's eastern treatment system	411,000	186,780	45.45	7,740	79,570 (annual total)	N/A	N/A	<ul style="list-style-type: none"> <li>Improve the living environment, and conserve water quality by switching from septic tanks / pumping treatment to sewerage treatment</li> </ul>
Total Amount of Pump Station (New) (7 projects)			4,197,191	1,594,180						

### Pump Station (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (thousand JPY)	JFM Loan Amount (thousand JPY)	JFM Loan Amount/ Total Project Cost (%)	Covered Area Population	Water Management Capacity (m <sup>3</sup> )	BOD Planned [Year/Period Average] (mg/L)	BOD Actual [Maximum monthly results] (mg/L) after treatment	Phosphorus (Year/Period Average) (mg/L)	Phosphorus Actual [Maximum monthly results] (mg/L) after treatment	Other positive environmental impact
Hakodate City	Hokkaido	Construction of electrical facilities at Yukawa Pumping Station. Construction of private power generation facility at aging Minato Pumping Station and Sumiyoshi Pumping Station	380,218	240,000	63.12	9,200	70,761 (monthly average)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 16,969kWh → 15,166kWh</li> </ul>

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

## (iii) Project by Project Reporting : Pump Station 2

### Pump Station (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (thousand JPY)	JFM Loan Amount (thousand JPY)	JFM Loan Amount/ Total Project Cost (%)	Covered Area Population	Water Management Capacity (㎡)	BOD Planned [Year/Period Average] (mg/L)	BOD Actual [Maximum monthly results] (mg/L) after treatment	Phosphorus (Year/Period Average) (mg/L)	Phosphorus Actual [Maximum monthly results] (mg/L) after treatment	Other positive environmental impact
Hachinohe City	Aomori	Renewal of substations at rainwater pumping station	101,920	101,920	100.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hitachinaka City	Ibaraki	Renewal of electrical equipment at wastewater relay pump station	44,043	31,300	71.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chiba City	Chiba	Renewal of aging settling basin facilities at Hibino Pump Station	59,480	29,740	50.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tachikawa City	Tokyo	Renovation of lighting fixtures (Fluorescent, mercury lamp → LED)	11,418	11,400	99.84	185,201	80,000 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Reduce greenhouse gas emissions by reducing power consumption * ※4,706kWh → 4,667kWh (monthly average)</li> </ul>
Fujisawa City	Kanagawa	Mechanical work to remodel settling basin equipment at Oba Pumping Station, and electrical work to remodel the aging loading equipment	77,048	76,900	99.81	47,900	5,575,340 (annual total)	N/A	N/A	N/A	N/A	N/A
Yamato City	Kanagawa	Waterproofing of facilities, renovation and renewal of private power generation facilities	227,247	107,028	47.10	230,792	N/A	15.0	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Prevention of flood damage to facilities due to flooding</li> <li>Sludge recycling rate: 100% (converted to cement)</li> </ul>
Toyama City	Toyama	Improving anti-corrosion and earthquake resistance in the Iwase Wastewater Relay Pump Station	127,700	61,165	47.90	241,189	40,831,000 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 82,997kWh → 75,996kWh</li> </ul>
Toyohashi City	Aichi	Improving earthquake resistance of facilities	166,005	83,000	50.00	264,099	1,126,606 → 1,314,840 (annual total)	N/A	N/A	N/A	N/A	N/A
Okazaki City	Aichi	Renewal of electrical equipment such as monitoring boards, automatic fine dust remover, residue discharger, residue washing dehydrator, etc.	25,000	12,500	50.00	3,454	1,120,281 (annual total)	N/A	N/A	N/A	N/A	N/A
Tokai City	Aichi	Longer durable life and earthquake resistance for rainwater pumping stations and treatment plants	1,073,860	486,100	45.27	98,721	9,131,895 (annual total)	15.0	5.45	1.0	0.98	N/A

## (iii) Project by Project Reporting : Pump Station 3

### Pump Station (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (thousand JPY)	JFM Loan Amount (thousand JPY)	JFM Loan Amount/ Total Project Cost (%)	Covered Area Population	Water Management Capacity (m)	BOD Planned [Year/Period Average] (mg/L)	BOD Actual [Maximum monthly results] (mg/L) after treatment	Phosphorus (Year/Period Average) (mg/L)	Phosphorus Actual [Maximum monthly results] (mg/L) after treatment	Other positive environmental impact							
Ise City	Mie	Renewal of rainwater pumping stations for basin-related public sewerage projects	2,503,663	97,600	3.90	65,940 →67,728	6,016,788 →6,186,010 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 10,411kWh → 6,711kWh</li> </ul>							
Kakogawa City	Hyogo	Renewal of mechanical and electrical equipment at the aging pump station	770,591	310,800	40.33	25,000	8,934,109 →9,000,000 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Energy-saving benefits of upgrading equipment</li> <li>Electricity usage (monthly average) 37,156kWh → 37,000kWh</li> </ul>							
Wakayama City (1)	Wakayama	Renewal of settling basin equipment that has exceeded its durable life	176,550	80,500	45.60	N/A	21,573 (monthly average)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 6,715kWh → 6,270kWh</li> </ul>							
Wakayama City (2)		Renewal of outflow gate facilities that have exceeded its durable life	41,800	19,100	45.69														
Wakayama City (3)		Reconstruction of rainwater pump equipment that has exceeded its durable life	91,550	41,600	45.44														
Wakayama City (4)		Reconstruction of rainwater pump equipment that has exceeded its durable life	178,780	81,300	45.47								N/A	12,346,910 →16,400,980 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 16,945kWh → 16,461kWh</li> </ul>
Wakayama City (5)		Renovation of pumping station equipment that has exceeded its durable life	15,453	7,000	45.30								83,929	105,448 (monthly average)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 10,840kWh → 9,950kWh</li> </ul>
Wakayama City (6)		Renovation for facilities that have exceeded its durable life of the pumping station	10,780	9,800	90.91								21,085	16,515 (monthly average)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 5,386kWh → 4,363kWh</li> </ul>
Tottori City (1)	Tottori	Expansion of the pumping station to prevent flood damage	98,159	98,159	100.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A							
Tottori City (2)		Expansion of the pumping station to prevent flood damage, improvement of earthquake resistance and extension of durable life	258,685	258,685	100.00	54,926	488,212 (monthly average)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Electricity usage (monthly average) 34,972kWh → 33,825kWh</li> </ul>							

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

## (iii) Project by Project Reporting : Pump Station 4

### Pump Station (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (thousand JPY)	JFM Loan Amount (thousand JPY)	JFM Loan Amount/ Total Project Cost (%)	Covered Area Population	Water Management Capacity (m)	BOD Planned [Year/Period Average] (mg/L)	BOD Actual [Maximum monthly results] (mg/L) after treatment	Phosphorus (Year/Period Average) (mg/L)	Phosphorus Actual [Maximum monthly results] (mg/L) after treatment	Other positive environmental impact
Hatsukaichi City (1)	Hiroshima	Renovation and renewal of returning sludge pumps at the aging Ohno Purification Center	9,130	4,100	44.91	12,657 →13,857	1,243,043 →1,360,895 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Improve public health, and preserve water quality in public waters</li> </ul>
Hatsukaichi City (2)		Renewal of sewerage pumps at Yuwa Purification Center and excess sludge pumps at the aging Hatsukaichi Purification Center	13,382	12,400	92.66	55,744 →58,374	5,573,685 →5,836,651 (annual total)	N/A	N/A	N/A	N/A	
Iwakuni City (1)	Yamaguchi	Detailed design work to replace the manhole pump building at the Iwakuni Minami Seseragi Center with a sewerage pump building	9,000	4,500	50.00	43,295	791,040 (annual total)	N/A	N/A	N/A	N/A	N/A
Iwakuni City (2)		Renovation of rainwater drainage facilities	242,140	73,027	30.16	8,856	537,600 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Reduce flood damage</li> <li>Electricity usage (monthly average) 26,229kWh → 25,000kWh</li> </ul>
Takamatsu City	Kagawa	Renovation of aging facilities	241,133	125,300	51.96	N/A	41,339,683 →42,931,928 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Reduce CO2 emissions by restoring functions and installing energy-saving equipment</li> </ul>
Marugame City	Kagawa	Renewal of each pumping station facility	1,171,816	538,400	45.95	48,773	8,657,120 →9,357,360 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Reduce CO2 emissions by installing energy-saving equipment</li> <li>Electricity usage (monthly average) 115,401kWh → 114,555kWh</li> </ul>
Imabari City	Ehime	Expansion of rainwater pumps at the Tenpozan Drainage Pump Station. Renewal of equipment at pump stations in the city to improve earthquake resistance	399,800	180,970	45.27	87,215	2,764,880 (annual total)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Prevention of urban flooding damage by expanding rainwater pumps</li> <li>Electricity usage (monthly average) 25,543kWh → 24,047kWh</li> </ul>
Yatsushiro City	Kumamoto	Renewal of diesel engines for existing pumps	444,068	226,300	50.96	11,275	998,631 (monthly average)	N/A	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Reduce greenhouse gas emissions by reducing emissions and electricity consumption</li> <li>Electricity usage (monthly average) 27,791kWh → 25,647kWh</li> </ul>
Total Amount of Pump Stations (Renewal) (29 projects)			8,970,419	3,410,594								

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

## (iii) Project by Project Reporting : Pipes 1

### Pipes (New)

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	Positive environment impact
Hakodate City	Hokkaido	Development of undeveloped lines	123,250	114,633	93.01	282	141	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 13,156 m<sup>3</sup> (annual total).</li> <li>Improvement of living environment through proper treatment of miscellaneous wastewater by flushing</li> </ul>
Asahikawa City	Hokkaido	Construction of new rainwater pipes	281,502	218,502	77.62	685	95	<ul style="list-style-type: none"> <li>The amount of treated water will increase by 10,611 m<sup>3</sup> due to the construction of new sewer pipes (total estimated value for 2021 years).</li> </ul>
Tomakomai City	Hokkaido	Construction of new pipes	1,622,105	1,176,800	72.55	6,125	167,789	<ul style="list-style-type: none"> <li>Water quality conservation and flood countermeasures for public water areas</li> </ul>
Hachinohe City	Aomori	Extension of pipes to cover unreached areas	1,919,980	1,919,980	100.00	14,210	1,141 →1,485	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 164,210 m<sup>3</sup> (annual total).</li> </ul>
Morioka City	Iwate	Construction of new sewerage pipes	1,623,240	975,000	60.07	7,818	258,780	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 168,325 m<sup>3</sup> (annual total).</li> <li>Conserving water quality in public water areas and ensuring a sanitary water environment</li> </ul>
Oshu City	Iwate	Construction of new pipes	1,147,040	719,400	62.72	8,206	50,678	<ul style="list-style-type: none"> <li>The amount of treated water increased by 146,438m<sup>3</sup> (annual total) due to the construction of new sewer pipes</li> <li>Decrease in sewerage discharge due to improved sewerage coverage</li> <li>Reduction of greenhouse gas emissions due to less business vehicles involved in water pumping</li> </ul>
Sendai City	Miyagi	Construct new sewer pipes to secure a backup function in the event of a disaster on the main line sewer pipes	880,413	441,956	50.20	2,873	717,850 →755,041	N/A
Iwaki City (1)	Fukushima	Development of sewerage pipes to cover undeveloped sewerage areas	93,808	78,200	83.36	639	171,691 →178,800	<ul style="list-style-type: none"> <li>The volume of treated water will increase by 1,599 m<sup>3</sup> (monthly average) due to the construction of new sewer pipes</li> </ul>
Iwaki City (2) *			295,503	240,600	81.42	N/A		
Iwaki City (3)		Maintenance of rainwater pipes, etc. to reduce flood damage	193,080	87,000	45.06	31	N/A	N/A
Iwaki City (4) *			93,710	67,800	72.35	N/A	N/A	
Mito City	Ibaraki	Construction of new pipes	1,506,000	1,131,600	75.14	7,866	215,632 →216,056	<ul style="list-style-type: none"> <li>The amount of treated water increased by 361,210m<sup>3</sup> (annual total) due to the construction of new sewer pipes.</li> <li>Improvement of public health and water quality in public water areas due to the increase in the households using flush toilets</li> </ul>

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

\* Borrowing entity whose newly constructed pipe length is not available. The number is not included in the calculation of total newly constructed pipe length on the summary page



## (iii) Project by Project Reporting : Pipes 2

### Pipes (New)

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	Positive environment impact
Hitachinaka City	Ibaraki	Install sewerage pipes for uncovered areas, and rainwater pipes to prevent flooding	2,000,790	1,151,800	57.57	4,114	99,752	<ul style="list-style-type: none"> <li>Conserve water quality in public waters</li> <li>Reduce flood damage</li> </ul>
Utsunomiya City	Tochigi	Construct new sewer pipes in uncovered areas under the public sewerage system and specific environmental protection sewerage systems	439,624	396,400	90.17	7,159	470,987	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 5,458,059 m<sup>3</sup> (annual total).</li> <li>Improvement of living environment by proper treatment of sewerage</li> </ul>
Tokorozawa City (1)	Saitama	Expansion of sewerage development in urbanization control areas and promotion of the connection to sewerage pipes (flushing)	2,642,651	1,761,500	66.66	8,340	321,555	<ul style="list-style-type: none"> <li>Reduce deaths and diseases caused by water pollution through ensuring public health</li> </ul>
Tokorozawa City (2)		Construction of new pipes for areas where sewer pipes can continue to use the pipes even in the event of an earthquake	148,335	95,800	64.58	239		<ul style="list-style-type: none"> <li>Reduce marine litter and prevent eutrophication by improving water quality in public water areas</li> </ul>
Yashio City (1)	Saitama	Construction of sewer pipes to drain water into public sewer pipes, and installing rainwater pipes to remove rainwater	1,809,264	496,100	27.42	5,258	72,240 →75,036	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 361,770 m<sup>3</sup> (annual total).</li> </ul>
Yashio City (2)				900,900	49.79			
Chiba City	Chiba	Construction of rainwater pipes, etc.	297,382	225,480	75.82	631	N/A	<ul style="list-style-type: none"> <li>Reduce of flood damage</li> </ul>
Ichikawa City (1)	Chiba	Construction of new wastewater pipes in uncovered regional public sewerage systems	2,502,097	1,715,800	68.57	11,190	3,210	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 427,652 m<sup>3</sup> (annual total).</li> <li>Improvement of water quality in public water areas, by switching from independent septic tanks, which have a large environmental impact, to regional public sewerage systems</li> </ul>
Ichikawa City (2)			3,334,380	2,495,100	74.83	3,164	1,230	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 163,867 m<sup>3</sup> (annual total).</li> <li>Improvement of water quality in public water areas, by switching from independent septic tanks, which have a large environmental impact, to regional public sewerage systems</li> </ul>
Ichikawa City (3) *		Construction of new rainwater pipes in undeveloped areas of public sewage systems	591,082	346,600	58.64	N/A	N/A	<ul style="list-style-type: none"> <li>The number of damages has declined in the densely populated areas where rainwater pipes have been installed</li> </ul>
Ichikawa City (4) *			96,620	90,600	93.77	N/A	N/A	
Funabashi City	Chiba	Constructin of the sewerage systems	4,243,633	2,650,300	62.45	9,743	583,739 →588,943	<ul style="list-style-type: none"> <li>Improvement of water quality</li> </ul>
Matsudo City	Chiba	Construction of pipes	2,582,831	1,655,100	64.08	11,917	436,517	<ul style="list-style-type: none"> <li>The volume of treated water will increase by 780,000 m<sup>3</sup> (monthly average) due to the construction of new sewer pipes</li> <li>Improving environmental health by expanding sewerage systems</li> </ul>

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\* Borrowing entity whose newly constructed pipe length is not available. The number is not included in the calculation of total newly constructed pipe length on the summary page

### (iii) Project by Project Reporting : Pipes 3

#### Pipes (New)

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	Positive environment impact
Kashiwa City	Chiba	Construction of new sewer pipes	1,455,110	1,048,300	72.04	6,648	388,695 →390,717	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 571,631 m<sup>3</sup> (annual total).</li> </ul>
Hachioji City	Tokyo	Construction of new sewer pipes	135,871	125,100	92.07	378	557,785 →557,917	<ul style="list-style-type: none"> <li>The amount of treated water will increase by 2m<sup>3</sup> (monthly average) due to the construction of new sewer pipes.</li> <li>Improvement of water quality in rivers that meets environmental standards due to the improvement of public health</li> </ul>
Tachikawa City	Tokyo	Construction of facilities for sending water from the Nishikicho Sewerage Treatment Plant to the Kitatama No. 2 Water Reclamation Center	231,029	173,000	74.88	3,400	97,218	<ul style="list-style-type: none"> <li>Improvement of the water environment through the integration of the watershed into the Kitatama No. 2 Water Reclamation Center and advanced treatment of wastewater</li> </ul>
Fujisawa City	Kanagawa	Construction of new sewer pipes (for uncovered areas)	657,153	558,200	84.94	603	422,423	<ul style="list-style-type: none"> <li>The volume of treated water will increase by 3,103m<sup>3</sup> (monthly average) due to the construction of new sewer pipes.</li> </ul>
Yamato City	Kanagawa	Extension of pipes	212,151	153,101	72.17	583	N/A	<ul style="list-style-type: none"> <li>Prevention of flood damage due to heavy rain</li> <li>Sludge recycling rate: 100% (converted to cement)</li> </ul>
Toyama City	Toyama	Construction of connecting pipes from consolidation and abolition of sewerage treatment facilities. Construction of rainwater pipes to prevent flooding	1,877,055	937,836	49.96	2,619	382,711	N/A
Nagano City	Nagano	Construction of sewer pipes	1,304,377	721,958	55.35	2,898	335,729	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 3,800m<sup>3</sup> (annual total).</li> <li>Improvement in washing ratio</li> </ul>
Matsumoto City (1)	Nagano	Construction of a new Chikuma wastewater mainline associated with road improvement	194,950	97,600	50.06	504	125,739	<ul style="list-style-type: none"> <li>Prevents discharge of untreated water into rivers from heavy rain</li> </ul>
Matsumoto City (2)			140,000	63,000	45.00			
Gifu City (1)	Gifu	Construct sewer pipes and drainage channels	27,409	25,600	93.40	5,510	379,200	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 137,695m<sup>3</sup> (annual total).</li> </ul>
Gifu City (2)			502,555	327,500	65.17			
Toyohashi City (1)	Aichi	Construction of rainwater pipes	1,589,431	798,902	50.26	1,917	264,099	<ul style="list-style-type: none"> <li>The volume of treated water will increase by 13,684m<sup>3</sup> (monthly average) due to the construction of new sewer pipes.</li> <li>Reduction of flood damage</li> <li>Reduction of the load on the treatment plant by switching from the combined system to the separate system</li> </ul>
Toyohashi City (2)		Extension of pipes	834,349	426,460	51.11	6,120		
Okazaki City	Aichi	Construction of new sewer pipes	603,307	331,000	54.86	3,806	339,763	N/A

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## (iii) Project by Project Reporting : Pipes 4

### Pipes (New)

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	Positive environment impact
Hekinan City	Aichi	Construction of new pipes	1,873,753,985	1,011,500	0.05	10,251	59,659 →62,575	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 139,669 m<sup>3</sup> (annual total).</li> <li>Alleviation of water pollution in lakes and rivers by expanding the coverage of the public sewerage system, which reduces the number of households using septic tanks and vault toilets</li> </ul>
Tokai City	Aichi	Construct new sewer to reduce sewerage uncovered areas	373,501	320,500	85.81	3,708	98,721	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 137,591 m<sup>3</sup> (annual total).</li> </ul>
Yokkaichi City	Mie	Construction of new sewerage pipes to improve water environment in uncovered areas	6,154,648	3,469,800	56.38	28,956	249,091	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 572,411 m<sup>3</sup> (annual total).</li> </ul>
Ise City	Mie	Construct new pipes under the regional sewerage system project	2,503,663	1,308,300	52.26	11,638	67,728	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 169,222 m<sup>3</sup> (annual total).</li> <li>Conservation of water quality in public water areas</li> </ul>
Matsusaka City (1)	Mie	Construction of new pipes	2,091,128	1,178,700	56.37	8,185	1,127	N/A
Matsusaka City (2)			198,647	151,100	76.06	1,171	N/A	
Yao City	Osaka	Development of undeveloped public sewerage areas	934,048	640,100	68.53	4,966	445	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 308,856 m<sup>3</sup> (annual total).</li> <li>Improvement of water quality and living conditions in public water areas by increasing the sewerage covered area population</li> </ul>
Shimamoto Town (1)	Osaka	Construction of sewerage pipes to expand sewerage connected areas	157,500	157,500	100.00	13,000	114	<ul style="list-style-type: none"> <li>The volume of treated water will increase by 912 m<sup>3</sup> (monthly average) due to the construction of new sewer pipes.</li> <li>Prevention of pollution of public water areas due to runoff of household wastewater, etc.</li> </ul>
Shimamoto Town (2)			58,800	58,800	100.00			
Shimamoto Town (3)			62,800	62,800	100.00			
Himeji City (1)	Hyogo	Construction of new pipes	194,085	194,078	100.00	3,468	479,873	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 478,395 m<sup>3</sup> (annual total).</li> </ul>
Himeji City (2)			645,862	645,844	100.00			
Kakogawa City	Hyogo	New construction of sewer pipes in undeveloped areas	2,703,311	1,502,700	55.59	7,933	507	<ul style="list-style-type: none"> <li>The volume of treated water will increase by 9,352 m<sup>3</sup> (monthly average) due to the construction of new sewer pipes.</li> <li>Conservation of water quality in public water areas such as rivers and nearby waterways</li> </ul>
Wakayama City (1)	Wakayama	Construction of new sewer pipes to cover more areas and prevent flood	1,435,598	926,900	64.57	6,430	137,018	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 224,006 m<sup>3</sup> (annual total).</li> <li>Improvement of the environment of public waters</li> </ul>
Wakayama City (2)			91,859	47,500	51.71	406		<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 14,144 m<sup>3</sup> (annual total).</li> <li>Improvement of the environment of public waters</li> </ul>

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

## (iii) Project by Project Reporting : Pipes 5

### Pipes (New)

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	Positive environment impact
Tottori City	Tottori	Expand sewer pipes to uncovered areas	161,715	161,715	100.00	227	32	N/A
Kure City	Hiroshima	Construction of new pipes	492,318	401,146	81.48	4,618	187,049	<ul style="list-style-type: none"> <li>The volume of treated water will increase by 679 m<sup>3</sup> (monthly average) due to the construction of new sewer pipes.</li> <li>Improvement of water environment</li> </ul>
Fukuyama City (1)	Hiroshima	Construction of new pipes	417,552	312,452	74.83	5,814	350,448 →351,267	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 83,302 m<sup>3</sup> (annual total).</li> </ul>
Fukuyama City (2)			334,029	198,529	59.43			
Hatsukaichi City (1)	Hiroshima	Construction of pipes	348,791	219,900	63.05	2,246	70,467 →74,238	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 108,465 m<sup>3</sup> (annual total).</li> <li>The amount of treated water to be increased by the construction of new sewer pipes are 287,679 m<sup>3</sup> (annual total).</li> </ul>
Hatsukaichi City (2)			1,487,110	969,600	65.20	5,957		
Shimonoseki City	Yamaguchi	Construction of the surfaces of the sewer pipes to increase the sewerage coverage rate	470,200	470,200	100.00	3,943	626	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 86,826 m<sup>3</sup> (annual total).</li> <li>Conservation of water quality in public waters</li> </ul>
Iwakuni City (1)	Yamaguchi	Construct new public sewer pipes	1,077,768	509,222	47.25	2,115	N/A	N/A
Iwakuni City (2)			677,721	280,123	41.33	1,246	N/A	
Aizumi Town	Tokushima	Construction of pipes, pavement restoration work, etc.	117,700	76,200	64.74	952	4,150 →4,275	<ul style="list-style-type: none"> <li>Conservation of water environment</li> </ul>
Marugame City	Kagawa	Construction of new sewer pipes	908,638	419,700	46.19	1,058	48,773	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 160,150 m<sup>3</sup> (annual total).</li> <li>Creating a comfortable living environment by preserving water quality in public water areas</li> </ul>
Imabari City (1)	Ehime	Construction to integrate agricultural community drainage facilities (Miyawaki Treatment Area) with public sewer pipes (Onishi Treatment Area)	4,200	2,600	61.90	89	3,495 →3,800	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 14,000 m<sup>3</sup> (annual total).</li> <li>Reducing electricity consumption and stabilizing water treatment at decommissioned treatment plants by connecting and integrating treatment sites with public sewage systems</li> </ul>
Imabari City (2)		Development of sewer pipes in uncovered areas	748,217	461,260	61.65	5,545	78,039 →89,160	<ul style="list-style-type: none"> <li>The volume of treated water will increase by 4,239 m<sup>3</sup> (monthly average) due to the construction of new sewer pipes.</li> <li>Improvement of the living environment and preservation of water quality by switching from purification tanks / pumping treatment to wastewater treatment method</li> </ul>
Imabari City (3)		Development of sewer pipes in uncovered areas	118,300	86,420	73.05	943	2,800	<ul style="list-style-type: none"> <li>The volume of treated water will increase by 648 m<sup>3</sup> (monthly average) due to the construction of new sewer pipes.</li> <li>Improvement of the living environment and preservation of water quality by switching from purification tanks / pumping treatment to wastewater treatment method</li> </ul>

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## (iii) Project by Project Reporting : Pipes 6

### Pipes (New)

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	Positive environment impact
Niihama City	Ehime	Construction of new pipes	2,851,385	618,800	21.70	3,481	74,626 →87,510	<ul style="list-style-type: none"> <li>The amount of treated water will increase by 7,300 t (monthly average) due to the construction of new sewer pipes.</li> </ul>
Nagasaki City (1)	Nagasaki	Construction of pipes	41,855	34,500	82.43	774	N/A	N/A
Nagasaki City (2)			435,288	150,885	34.66	710	341,431	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 3,179 m<sup>3</sup> (annual total).</li> </ul>
Yatsushiro City	Kumamoto	Development of sewer pipes to promote the spread of sewerage systems	1,603,246	1,011,300	63.08	4,820	59,567 →59,800	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 69,715 m<sup>3</sup> (annual total).</li> <li>Conservation of environment and water quality</li> </ul>
Kagoshima City	Kagoshima	Construction of new sewer pipes facilities	1,830,044	1,168,700	63.86	7,308	469,000	<ul style="list-style-type: none"> <li>The amount of treated water to be increased by the construction of new sewer pipes are 153,221 m<sup>3</sup> (annual total).</li> </ul>
Total Amount of Pipes (New) (73 projects)			1,945,718,579	46,169,882				

### Pipes (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount/ Total Project Cost (%)	Water treated (m <sup>3</sup> ) Actual/Planned/Estimated	Positive environment impact
Asahikawa City	Hokkaido	Renewal of sewer pipes	332,644	263,598	79.24	45,720 (annual total)	<ul style="list-style-type: none"> <li>Prevention of serious accidents and outages caused by aging sewerage facilities (about 1.6 km of replacement)</li> </ul>
Hakodate City	Hokkaido	Renovation (replacement and rehabilitation) of aging pipe facilities	813,492	647,067	79.54	206,650,000 (annual total)	<ul style="list-style-type: none"> <li>Reduction of road subsidence, reduction of rainwater inflow into pipes</li> </ul>
Hachinohe City	Aomori	Renovation of pipes	201,600	201,600	100.00	17,124,475 (annual total)	N/A
Morioka City	Iwate	Renewal of aging pipes and manhole openings	1,623,240	211,400	13.02	39,933,047 (annual total)	<ul style="list-style-type: none"> <li>Ensuring public water quality and sanitary water environment</li> </ul>
Mito City	Ibaraki	Renovation of aging pipe-related equipment	38,200	38,200	100.00	19,985,431 (annual total)	N/A
Utsunomiya City	Tochigi	Renovation of aged sewer pipes in public sewerage areas and improve earthquake resistance for pipes	158,606	123,200	77.68	88,375,852 (annual total)	N/A
Chiba City	Chiba	Renovation of aging sewer pipes and improving earthquake resistance of pipes	909,864	478,360	52.57	N/A	<ul style="list-style-type: none"> <li>Prevention of soil contamination caused by sewage outflow from damaged areas caused by aging, etc.</li> <li>Reduction of flood damage</li> </ul>

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

## (iii) Project by Project Reporting : Pipes 7

### Pipes (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount/ Total Project Cost (%)	Water treated (m <sup>3</sup> ) Actual/Planned/Estimated	Positive environment impact
Ichikawa City (1)	Chiba	Make sewer pipes (which were installed in accordance with the former earthquake-resistant standards and laid under emergency transportation routes or as sewerage treatment routes from shelters) earthquake-resistant and install manhole toilets	209,018	120,300	57.55	N/A	<ul style="list-style-type: none"> <li>Ensuring public health and preserving water quality in the event of an earthquake</li> </ul>
Ichikawa City (2)			48,030	29,800	62.04	N/A	
Ichikawa City (3)			55,892	47,200	84.45	N/A	
Funabashi City	Chiba	Renovate and upgrade aging sewerage systems	306,628	212,000	69.14	N/A	<ul style="list-style-type: none"> <li>Curbing soil pollution</li> </ul>
Hachioji City	Tokyo	Upgrade manhole pumps	62,447	18,500	29.63	65,967,170 (annual total)	<ul style="list-style-type: none"> <li>Improving the water quality of rivers that meets environmental standards by updating facilities appropriately</li> </ul>
Tachikawa City (1)	Tokyo	Renovation of the aging Midorikawa trunk line after its standard durable life (50 years)	209,256	156,000	74.55	1,405,527,552 (annual total)	<ul style="list-style-type: none"> <li>Prevention of soil contamination caused by sewerage spilling from a pipe damaged by an earthquake or other natural disaster</li> </ul>
Tachikawa City (2)			174,961	92,700	52.98	1,109,293,056 (annual total)	
Fujisawa City	Kanagawa	Make aging pipes earthquake-proof	343,196	310,100	90.36	55,838,675 (annual total)	N/A
Yamato City	Kanagawa	Renovation and renewal of pipes and manhole pump equipment	31,870	22,999	72.17	N/A	N/A
Toyama City	Toyama	Renovation of aging sewer pipes	1,504,071	881,894	58.63	57,689,007 (annual total)	N/A
Nagano City	Nagano	Upgrading sewer pipes	1,134,889	961,674	84.74	N/A	N/A
Matsumoto City (1)	Nagano	Improvement of pipes and earthquake countermeasures for pipeline facilities based on the results of surveys conducted to ensure the safety of lifelines	511,506	342,600	66.98	22,199,364 (annual total)	<ul style="list-style-type: none"> <li>Prevention of sewerage outflow in the event of an earthquake or other natural disaster by replacing aging sewer pipes and improving earthquake-resistance</li> </ul>
Matsumoto City (2)			518,831	236,500	45.58		
Gifu City (1)	Gifu	Replacement of sewer pipes	368,826	294,600	79.88	56,930,753 (annual total)	N/A
Gifu City (2)			709,274	378,800	53.41		
Toyohashi City	Aichi	Make highly important pipe earthquake-proof	731,650	369,148	50.45	28,394,823 (annual total)	N/A

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

## (iii) Project by Project Reporting : Pipes 8

### Pipes (Renewal)

Borrowing Entity	Prefecture	Project Description	Total Project Cost (JPY 1,000)	JFM Loan Amount (JPY 1,000)	JFM Loan Amount/ Total Project Cost (%)	Water treated (m <sup>3</sup> ) Actual/Planned/Estimated	Positive environment impact
Okazaki City	Aichi	Renovation and renewal of sewer pipes	1,990,398	1,446,700	72.68	N/A	N/A
Ise City	Mie	Upgrading of sewerage manhole pumps	2,503,663	2,000	0.08	6,186,010 (annual total)	N/A
Yao City	Osaka	Renovation and renewal of old pipes	376,987	376,900	99.98	6,128 (annual total)	<ul style="list-style-type: none"> <li>Preventing road collapse accidents by improving the strength of aging pipes</li> </ul>
Higashiosaka City	Osaka	Updating pipes	1,411,606	1,072,600	75.98	102,437,438 (annual total)	<ul style="list-style-type: none"> <li>Upgrading earthquake resistance and treatment capacity</li> </ul>
Wakayama City (1)	Wakayama	Renewal of pipes that exceeded its durable life	234,947	116,800	49.71	4,295 (annual total)	N/A
Wakayama City (2)			37,950	34,500	90.91	766 (annual total)	
Tottori City (1)	Tottori	Maintenance of gutters and rainwater pipes to prevent flood damage in urban areas, improvement of earthquake resistance and expansion of durable life of sewer pipes	21,660	21,660	100.00	N/A	N/A
Tottori City (2)			507,090	507,090	100.00	N/A	
Kure City	Hiroshima	Renovation of aging pipes	792,726	344,321	43.44	25,311,507 (annual total)	<ul style="list-style-type: none"> <li>Prevention of underground pollution caused by sewerage leakage from earthquakes and other natural disasters</li> <li>Improvement of water circulation by preventing water leakage due to aging</li> </ul>
Fukuyama City (1)	Hiroshima	Updating pipes	1,151,634	738,298	64.11	40,773,619 (annual total)	N/A
Fukuyama City (2)			140,446	98,875	70.40		
Iwakuni City	Yamaguchi	Improving the functions of aging pipes	117,995	58,078	49.22	8,287,867 (annual total)	N/A
Imabari City (1)	Ehime	Renovation and renewal of old pipes	139,883	118,990	85.06	15,718,816 (annual total)	<ul style="list-style-type: none"> <li>Prevention of underground pollution caused by sewerage leakage due to broken pipes</li> </ul>
Imabari City (2)		Renovation of Miyanoura Rainwater main line	38,800	20,530	52.91	N/A	N/A
Total Amount of Pipes (Renewal) (37 projects)			20,463,776	11,395,582			

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

### (iii) Project by Project Reporting : Others 1

#### 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 (%)	Positive environment impact
Morioka City	Iwate	Cost for construction of watershed sewerage systems	182,629	181,000	99.11	N/A
Utsunomiya City	Tochigi	Cost for project of watershed sewerage systems	15,897	15,800	99.39	N/A
Takasaki City	Gunma	Construction of new pipes in uncovered areas (Sewer pipes and rainwater pipes)	2,988,958	1,344,500	44.98	<ul style="list-style-type: none"> <li>Along with the increase in the total length of pipes (15,921m), the treatment area increased by about 92ha</li> </ul>
Chiba City (1)	Chiba	Development of rainwater storage facilities	243,926	125,220	51.34	<ul style="list-style-type: none"> <li>Reducing flood damage</li> </ul>
Chiba City (2)			180,000	110,000	61.11	
Funabashi City	Chiba	Cost for construction of watershed sewerage systems and for other cities	496,123	432,800	87.24	N/A
Hiratsuka City	Kanagawa	Rebuild sewerage duct facilities and make them earthquake-resistant, and extend the durable life of pump stations by making them earthquake-resistant	1,021,558	510,700	49.99	N/A
Fujisawa City (1)	Kanagawa	Cost for the Sagami River basin	6,582	6,300	95.72	N/A
Fujisawa City (2)		Construction of outdoor stairs in the water treatment building of the Oshimizu Purification Center	27,565	27,500	99.76	
Matsumoto City (1)	Nagano	Construction of rainwater pipes to prevent flood damage	114,600	57,200	49.91	<ul style="list-style-type: none"> <li>Newly constructed pipe length: 414 m</li> <li>Diversion due to the construction of rainwater pipes reduced leakage of untreated sewerage into rivers from heavy rain</li> </ul>
Matsumoto City (2)			224,046	155,400	69.36	
Ise City	Mie	Cost for construction of watershed sewerage systems	149,034	148,700	99.78	<ul style="list-style-type: none"> <li>Conservation of water quality in public waters</li> </ul>
Amagasaki City	Hyogo	Construction of manhole toilets and construction of rainwater seepage pipe to prevent flooding	277,225	150,326	54.23	N/A
Fukuyama City	Hiroshima	Construction of new facilities for rainwater treatment projects	6,624	3,312	50.00	<ul style="list-style-type: none"> <li>Newly constructed pipe length: 5,814 m</li> <li>The amount of treated water to be increased by the construction of new sewer pipes are 83,302 m<sup>3</sup> (annual total).</li> </ul>
Aizumi Town	Tokushima	Redevelopment of human waste treatment facilities that are aging	894,880	443,800	49.59	N/A
Nagasaki City	Nagasaki	New City Hall Construction Project (to deal with the narrowness of the building and the dispersion of windows, the lack of seismic capacity, and barrier-free measures)	189,842	180,300	94.97	N/A
Total Amount of Others (New) (16 projects)			7,019,489	3,892,858		

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity



## (iii) Project by Project Reporting : Others 2

### 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 (%)	Positive environment impact
Sapporo City	Hokkaido	Seismic measures of pipelines and reconstruction of facilities	2,068,840	684,359	33.08	N/A
Hakodate City	Hokkaido	Cost for project of watershed sewerage systems	123,260	120,600	97.84	N/A
Hachinohe City	Aomori	Cost for construction of watershed sewerage systems (replacement of power substation, renovation of pipeline facility, etc.)	19,100	19,100	100.00	N/A
Oshu City	Iwate	Cost for construction of watershed sewerage systems (replacement of treatment plant facilities, etc.)	52,145	51,800	99.34	N/A
Hitachinaka City	Ibaraki	Cost for construction of watershed sewerage systems (contributions for renovation work of electric machinery and equipment in the Naka Kuji Purification Center)	50,232	45,500	90.58	N/A
Takasaki City	Gunma	Improvement of sewerage treatment related facilities and cost of watershed sewerage systems	527,665	393,500	74.57	<ul style="list-style-type: none"> <li>▪ Prevention of serious accidents caused by aging sewerage facilities</li> <li>▪ Electricity usage (monthly average) 547,602kWh → 508,496kWh</li> </ul>
Hiratsuka City	Kanagawa	Construction work for sewerage pipes, earthquake resistance, measures of making pump stations earthquake-resistant and expanding their lifespan	1,650,713	949,700	57.53	N/A
Fujisawa City	Kanagawa	Commission of design for renovation work of roadway shed at Fujigaya Pumping Station	10,196	10,100	99.06	N/A
Yamato City	Kanagawa	Maintenance of internal roads, renovation and renewal of monitoring control equipment	8,463	3,986	47.10	N/A
Toyama City	Toyama	Seismic measures of administrative buildings, etc. at treatment plants	338,713	163,323	48.22	N/A
Matsumoto City	Nagano	Cost for project of watershed sewerage systems	3,228	3,200	99.13	<ul style="list-style-type: none"> <li>▪ Stable sewerage treatment even in the event of natural disasters by updating aging facilities and improving earthquake-resistance</li> </ul>
Kobe City	Hyogo	Renovation and renewal of sewerage treatment, advanced treatment, sludge treatment, pumping stations, sewer pipes, and earthquake countermeasures at aging facilities	1,735,895	963,000	55.48	<ul style="list-style-type: none"> <li>▪ Sustaining the environmental benefits of public sewer pipes</li> <li>▪ Reduction of power consumption and greenhouse gas emissions by replacing facilities with sophisticated ones.</li> </ul>
Amagasaki City (1)	Hyogo	Renewal of sewerage facilities as a countermeasure for earthquakes and aging facilities	1,844,955	738,174	40.01	N/A
Amagasaki City (2)		Cost for project of watershed sewerage systems (renovation of sewer pipes, pumping stations and treatment plants)	224,620	194,000	86.37	
Nishinomiya City (1)	Hyogo	Renewal and reconstruction of various aging facilities, including facilities for sewerage treatment, advanced treatment, sludge treatment, pump station, pipes, etc.	496,550	496,500	99.99	N/A
Nishinomiya City (2)			7,588,525	1,787,500	23.56	
Nishinomiya City (3)			3,825,088	1,367,000	35.74	
Kure City	Hiroshima	Operations to change business plan	70,699	32,569	46.07	N/A

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

### (iii) Project by Project Reporting : Others 3

#### 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 (%)	Positive environment impact
Fukuyama City (1)	Hiroshima	Reconstruction and renewal of facilities related to rainwater treatment projects	815,956	136,750	16.76	N/A
Fukuyama City (2)			1,465,482	765,184	52.21	
Hatsukaichi City	Hiroshima	Renovation and renewal of the in-house power generation facility at the aging Hatsukaichi Purification Center	24,400	14,500	59.43	▪ Improvement of public health and preservation of water quality in public waters
Iwakuni City (1)	Yamaguchi	Cost of watershed sewerage systems	2,859	2,700	94.44	N/A
Iwakuni City (2)			1,291	1,200	92.95	
Nagasaki City	Nagasaki	Renovation of aging central monitoring and control equipment	642,674	222,771	34.66	N/A
Kagoshima City	Kagoshima	Renovation and renewal of aging equipment and pipelines	1,830,044	1,168,700	63.86	N/A
Total Amount of Others (Renewal) (25 projects)			25,421,593	10,335,716		

※Numbered brackets after borrowing entity are cases where there are several JFM loans in one project, or several JFM loan projects in one borrowing entity

# (iv) Case Study 1 : Sewage Sludge Center Renovation Project

Seibu Sludge Treatment Center



## Project Overview (Project Period: FY 2017 to FY2023)

Total Project Cost : JPY 1,519.5 million  
 “of which JFM funds” : JPY 502.6 million  
 (Apr.2021 to Mar.2022)

- In Sapporo City, sewage sludge treatment is centralized in two centers (sludge treatment plants) at the east and west part of the city, and they make effective use of all incineration ash to be cement and other construction materials.
- Seibu Sludge Treatment Center operates a total of 5 sewage sludge incinerators (Series1~4: 100t/day, Series5: 150t/day), of which 1~2 series incinerators have been in service for 39 years and are aging.

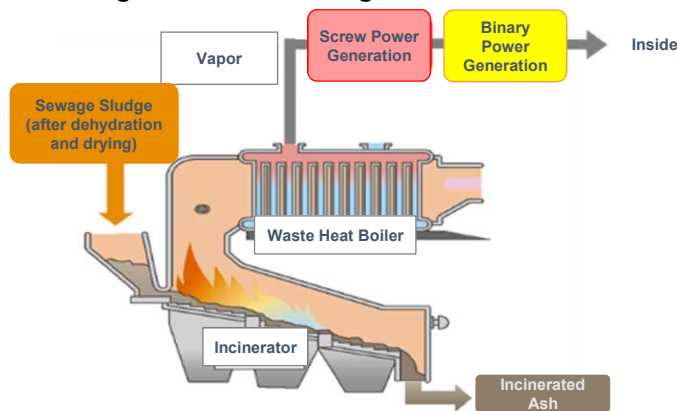


- As a result of comparative study about how to effectively use sewage sludge, it is decided to keep incineration as a comprehensive judgement from costs, greenhouse gas emissions, and the stability of product demand.
- The JFM funds are used to renovate the series 1 ~ 2 incinerator(s).

## Highlights Environmental effects of installing waste heat generation facilities

- Electricity generated by waste heat from sewage sludge incineration (screw power generation, binary power generation) is carbon-free electricity, and expected to reduce greenhouse gas emissions.

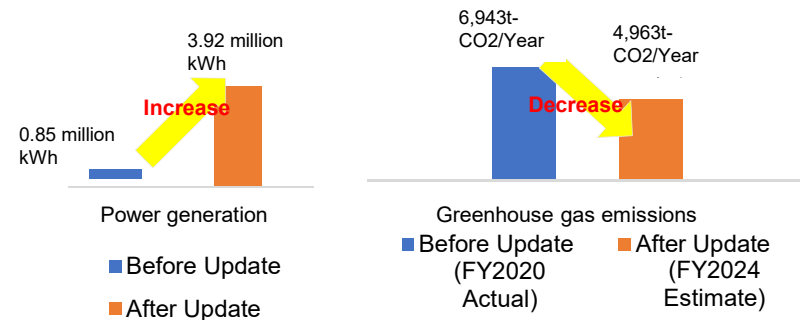
Power generation flow diagram



- This Sludge Center reduces nitrous oxide by using the same type of high-temperature incinerator as before the renovation, and greenhouse gas emissions by installing waste heat generation facilities to cover the electricity used.

Power generation: 3.07 million kWh/year

Greenhouse gas reduction: 1,980 t-CO2/year



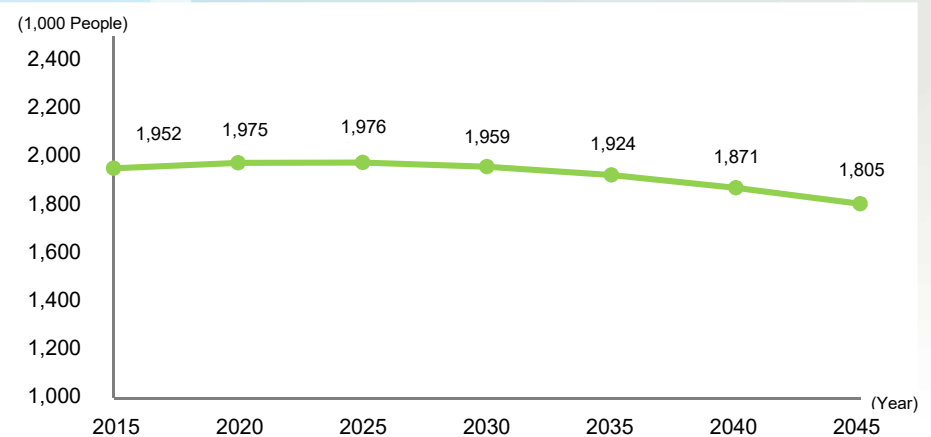
# <Reference> Sapporo City, Hokkaido



## DATA

Population	1,973,395 (as of October 1 2020)
Area	1,121.26 km <sup>2</sup> (as of April 1 2022)
Sewerage Coverage	99.8% (as of March 31 2022)
City Budget	JPY 1,161.6 billion (FY 2022 General Account Initial Budget)

## Demographic Trend



\*Source: National Institute of Population and Social Security Research, Japan's Future Population Estimates by Region (2018)

## Overview

- Sapporo City, Hokkaido, is located in the southwestern part of the Ishikari Plain in Hokkaido, and is characterized by refreshing summer and cold, snowy winters.
- Since the establishment of the Hokkaido Development Commission in 1869, Sapporo City has continued to be evolved as a base for the development of Hokkaido and now has a population of over 1.9 million (about 30% of the population of Hokkaido), the fourth largest city, town and village after Yokohama, Osaka and Nagoya.
- Currently, trying to respond to rapidly increasing aging facilities, increasing natural disasters, water quality conservation, and effective use of sewerage energy and resources.



Sapporo Snow Festival



Sapporo Hitsujiigaoka Observatory

Genghis Khan



# (iv) Case Study 2 : New Purification Center Construction Project

New purification center under construction



## Project Overview (Project Period: FY 2017 to FY 2023 (planned))

Total Project Cost : JPY 3,090 million  
 “of which JFM funds” : JPY 1,435 million  
 (Apr.2021 to Mar.2022)

- The existing purification center has been in service for more than 40 years since 1976, which ages over time and deteriorates due to salt damage because it is located on the coast. On top of that, disaster response is another issue due to the lack of anti-earthquake capacity.
  - The facilities are too old to meet the effluent water quality standards stipulated in the Sewerage Act, and there are raising concerns on the impact on residents' lives and the water environment.
- ▼
- A new eco-friendly purification center will be built which utilizes sewerage resources such as recycled water and biomass power generation.
  - The JFM funds are used for sewerage water treatment plants, sludge treatment plants, administrative buildings and other facilities related to the construction of a new purification center.

## Highlights Environmental Effects of Digestive Gas Power Generation

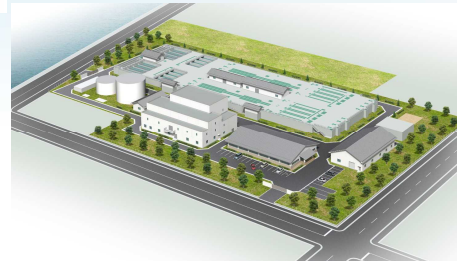
### 1 Project Scheme

- Digestion gas generated at the purification center is sold to the operators. This project operator will cover all expenses of design, construction, maintenance, management, and removal of the facilities from the sale of electricity using the power generation facilities developed within the center by applying the FIT system

### 2 Environmental Effects

- Digestion gas generated during the sludge treatment process is effectively used to generate stable power.
- Digestion gas is biomass energy and contributes to reducing CO2 emissions. This project contributes to creating a low-carbon society by effectively utilizing sewerage resources.
- Annual electricity generation 500 thousand kWh/year (Approximately 167 households' electricity consumption, assuming a monthly electricity consumption of 250 kWh)
- CO2 reduction per year: approximately 205 t/year

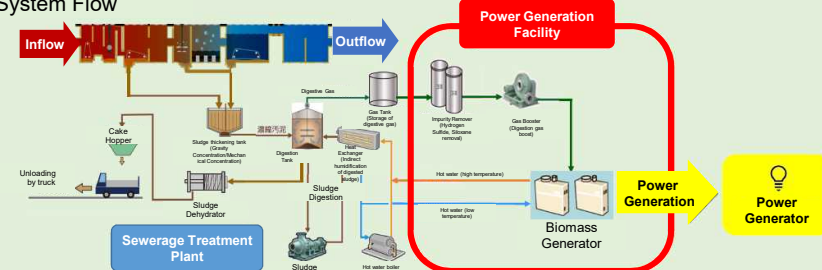
Conceptional overview of purification center



Conceptional view of digestion gas power generation equipment



System Flow



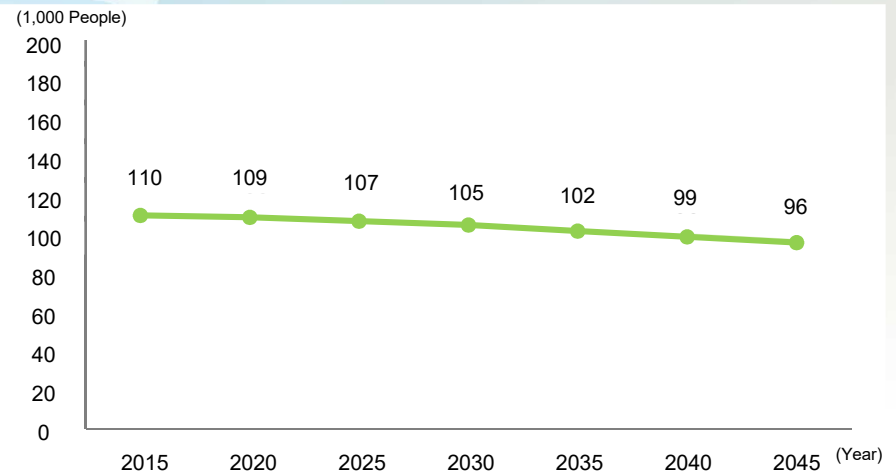
# <Reference> Marugame City, Kagawa



## DATA

Population	109,513 (as of October 1 2020)
Area	111.83 km <sup>2</sup> (as of April 1 2022)
Sewerage Coverage	43.8%( as of March 31 2021)
City Budget	JPY 53.9 billion (FY 2022 General Account Initial Budget)

## Demographic Trend



\*Source: National Institute of Population and Social Security Research, Japan's Future Population Estimates by Region (2018)

## Overview

- Marugame City, Kagawa Prefecture, is located in the center of the coastline of Kagawa Prefecture, which stretches from east to west, with the scenic Seto Inland Sea National Park in the north, mountains stretching across the Sanuki Mountains in the south, the Sanuki Plain in the land area, urban areas along the northern waterfront, rural landscapes in the middle and southern regions, and islands of the Shiwaku marsh scattered throughout the Seto Inland Sea.
- The public sewerage system, in the former Marugame City, was approved as an independent public sewerage system in 1955. The sewerage system was put into service in 1976 and has been improved since that time. The former Ayauta town obtained approval for project of drainage basin specific environmental conservation public sewerage system in 1995, and was introduced in 1998. The former Iiyama town received approval for a project in 1993 as a drainage basin related public sewerage system, and it started operating in 1996.
- At present, various efforts are being made to solve the problems of sewerage systems. Such as ensuring sewerage functions that are necessary even in the event of a major disasters, as well as measures against flooding, aging, improvement of combined sewerage systems, and measures against global warming.



Marugame Uchiwa



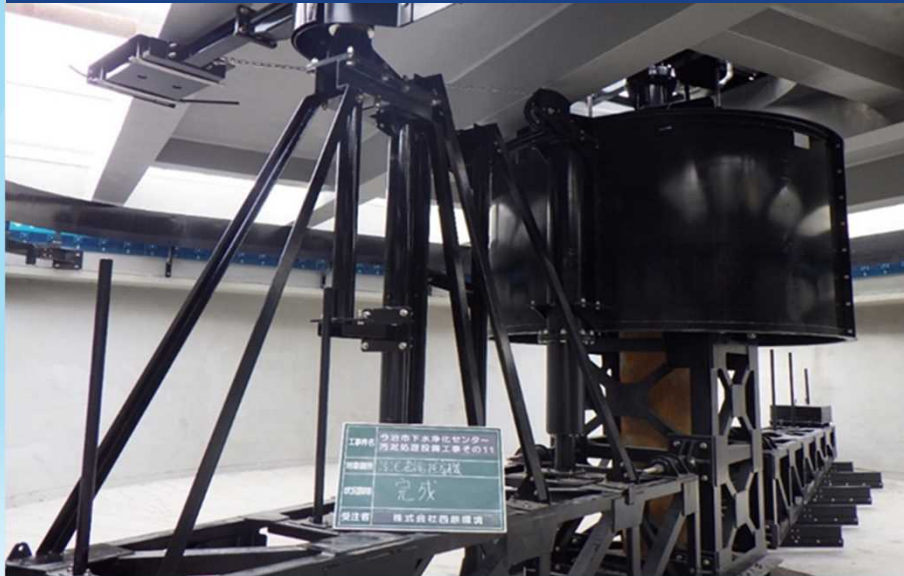
Marugame Castle



Honetsukidori

# (iv) Case Study 3 : Sewage Sludge Treatment Plant Renewal Project

Concentrated sewage sludge scraper



## Project Overview (Project Period: FY 2019 to FY 2022 (tentative))

Total Project Cost : JPY 490.4 million  
 “of which JFM funds” : JPY 183.3 million  
 (Apr.2021 to Mar.2022)

- The Imabari Sewage Treatment Center, the city's largest sewage treatment plant, has been in service for more than 45 years and is undergoing a series of upgrades to its aging facilities.
- Starting in FY 2019, the company began upgrading its sewage sludge treatment facilities to the latest equipment, including low-moisture content dehydrators, to reduce sludge treatment costs and the environmental impact of landfill disposal.
- Renewal of the sewage sludge treatment facility at the Imabari Sewage Treatment Center (Concentrated sewage sludge scrapers, concentrated sewage sludge pumps, wet desulfurization equipment, gas storage tanks, dehydrators, etc.).
- JFM Fund was allocated to the renewal of the facility.

## Highlights Lower Environmental Impact by Reducing Sewage Sludge

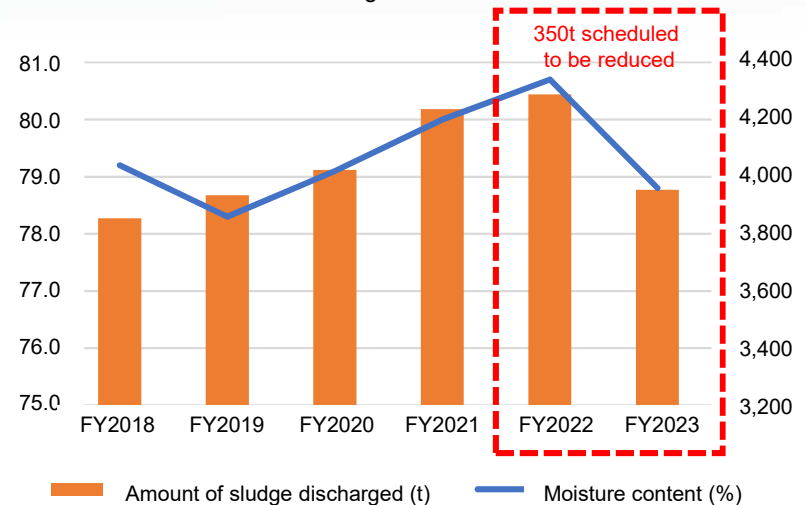
### 1 Renewal of dehydrators

- This is a project to replace the aging sewage sludge treatment facilities that replaces one of three sludge dehydrators installed in 1993.
- The use of a dehydrator with a moisture content of 75% or less in the renewal process is expected to reduce the amount of sewage sludge generated, treatment costs, and environmental impact by reducing landfill waste.

### 2 FY 2022 Outlook

- In FY 2022, it is expected that average water content is 80.7% and sewage sludge generation becomes 4,300 tons. In FY 2023, along with this project, it is expected that average water content will be 78.8% and sewage sludge generation will become about 3,950 tons, resulting in an annual reduction about 350 tons.
- A part of the sewage sludge generated is used as cement from this fiscal year. Recycling sewerage sludge is undergoing and recycling rate of sewage sludge becomes around 40%.

Volume and moisture content of sewage sludge discharged from Imabari Sewage Treatment Center



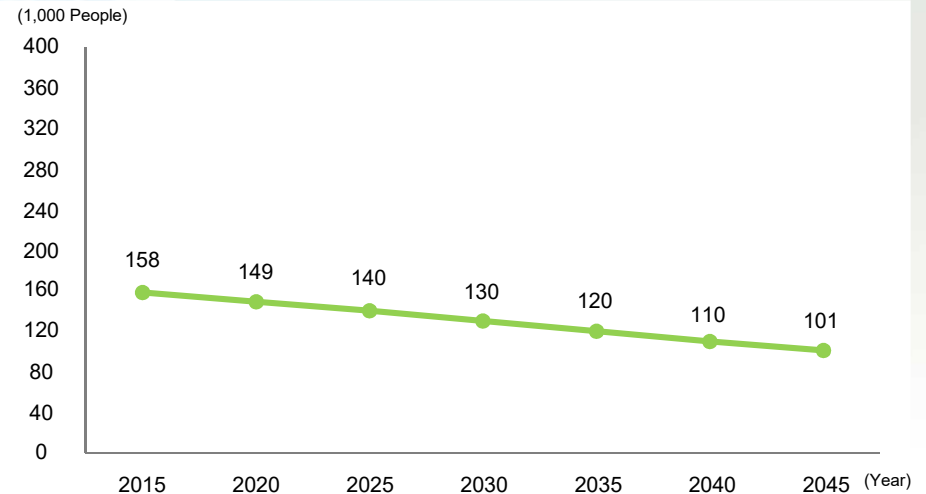
# <Reference> Imabari City, Ehime



## DATA

Population	151,672 (as of October 1 2020)
Area	419.21 km <sup>2</sup> (as of April 1 2022)
Sewerage Coverage	64.5% (as of March 31 2021)
City Budget	JPY 74.72 billion (FY 2022 General Account Initial Budget)

## Demographic Trend



\*Source: National Institute of Population and Social Security Research, Japan's Future Population Estimates by Region (Estimates for 30 (2018))

A view of the Kurushima Strait Bridge on the islands of the Seto Inland Sea from the Mt. Kiro Observatory



Holding Cycling Shimanami

## Overview

- Imabari City is located in the northeastern part of Ehime Prefecture, almost in the center of the Seto Inland Sea, and is endowed with wonderful scenery including the beautiful scattered islands which is referred to as the Aegean Sea of the East, and the Shimanami Kaido, as well as a variety of regional resources such as various historical and cultural heritages and traditional performing arts represented by the Japanese heritage "Murakami Pirates," art galleries, museums and hot spring resorts, as well as ingredients from the mountains and sea.
- It is one of the most concentrated areas of towels and maritime industries in Japan, and boasts the highest value of manufactured goods shipped, including oil-related businesses and the food industry, in Shikoku.
- The Setouchi Shimanami Kaido has been nationally designated as a "National Cycle Route" and is attracting attention from cycling enthusiasts around the world as a "sacred place for cyclists". Cycling Shimanami 2022, an international cycling event, took place along the main motorway in October 2022.