Pre-Analysis Plan (ver. 1.0)

Information Provision and the Timing of Subsidy Applications for Conversion to Combined Septic Tanks: A Cluster-Randomized Trial in Date City

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1 Tentative Title

Information Provision and the Timing of Subsidy Applications for Conversion to Combined Septic Tanks: A Cluster-Randomized Trial in Date City

2 Research Objective

The purpose of this study is to estimate the causal effects of information provision on households' initial and intermediate actions related to conversion to combined septic tanks in Date City, Fukushima Prefecture, by means of a cluster-randomized controlled trial (RCT).

In particular, this study focuses on whether information provision affects:

(1) household contact with the City, including consultations and inquiries,

(2) awareness of the subsidy program and required procedures, as reflected in consultation-related behavior and records,

(3) pre-construction subsidy applications, and

(4) subsequent actions such as construction starts and completion.

Because conversion to a combined septic tank is a high-cost and high-friction action involving financial burdens, coordination with contractors, family discussions, and procedural uncertainty, the study places primary emphasis not on final completion itself but on the timing of pre-construction subsidy applications as a key downstream behavioral outcome.

Specifically, this study seeks to answer the following questions:

(1) Does clearer information about consultation channels and procedures increase consultation behavior?

(2) Does an enhanced leaflet that prompts households to specify when they will consult lead to earlier subsidy applications compared with the standard leaflet?

(3) At which stage of the process—between consultation, contractor coordination, pre-construction subsidy application, order/authorization, construction start, and later administrative milestones—do bottlenecks appear to be most salient?

(4) Are there heterogeneous effects by household type, such as single-treatment septic tank households, night-soil collection households, elderly-related households, or households with family-mediated consultation?

(5) Can spillovers through family members or neighbors be documented using consultation logs and other supplementary information?

3 Background and Policy Relevance

In areas outside the public sewer service area in Date City, conversion from single-treatment septic tanks or night-soil collection systems to combined septic tanks remains an important policy issue in domestic wastewater management. Combined septic tanks treat household wastewater from toilets, kitchens, baths, and other sources together, and are therefore important from the perspectives of water quality, sanitation, and environmental improvement.

At the same time, conversion is difficult for households because of several frictions:

- uncertainty regarding subsidy amounts and out-of-pocket costs,
- uncertainty regarding where and how to consult,
- the need to coordinate with contractors,
- the need to consult family members,
- and tendencies to postpone costly or complicated decisions.

Although Date City has previously provided information through city newsletters and its website, the use of individual insert leaflets as a more explicit communication device has been limited. This study evaluates whether a realistic and administratively feasible intervention—leaflets inserted in the city newsletter— can improve residents' understanding and encourage actions such as consultation and subsidy application.

Institutionally, residents are not necessarily required to have contractors submit subsidy applications on their behalf. However, in practice, subsidy application procedures are often carried out after households have already progressed substantially in contractor coordination, and contractors frequently assist with or handle the application process. Accordingly, subsidy application should not be interpreted as a mere administrative filing, but rather as an indicator that concrete preparation for implementation has substantially progressed.

The policy relevance of this study lies in clarifying which stages can be influenced by low-cost administrative communication, and where stronger support may still be needed.

4 Study Design

4.1 Study Area and Target Households

The target population consists of households located in areas outside the public sewer service area in Date City, especially households currently using single-treatment septic tanks or night-soil collection systems.

The main analytical sample will be constructed using anonymized administrative data with household research IDs. Area classification (inside sewer area, outside sewer area, mixed areas) and current wastewater treatment type will be identified from administrative records.

Clusters that contain both sewer-service and non-sewer-service households will be excluded from the main treatment allocation for this septic-tank RCT in order to avoid interference with the separate sewer connection encouragement RCT.

4.2 Cluster Structure

The unit of randomization will be reconstituted clusters constructed from aza (small administrative areas) according to pre-specified cluster-construction rules. The final cluster definition will be determined by applying these pre-specified rules to the frozen administrative roster received in spring 2026.

Cluster definition will take into account:

- geographic contiguity,
- the number of target households (single-treatment septic tank and night-soil collection households),
- consistency with practical distribution units used by the City, and
- avoidance of interference with the sewer connection encouragement RCT.

4.3 Random Assignment

This study is designed as a parallel-arm cluster-randomized controlled trial. After receiving the frozen household roster reflecting residential updates, the researcher will conduct random assignment once, using a pre-specified and reproducible procedure.

To improve comparability across arms, the assignment will be implemented using a pre-specified covariate-constrained randomization procedure. The procedure will impose hard constraints on the total number of clusters assigned to each arm and on district-level allocations. Among allocations satisfying these constraints, candidate allocations will be evaluated using pre-specified balance metrics based on cluster size and baseline cluster-level variables available at the time of assignment.

4.4 Intervention Timing

The intervention schedule is as follows:

Period	Status
April–July 2026	Baseline period (no leaflet intervention)
August 2026	First-wave intervention (standard vs. enhanced leaflet)
November 2026	Second-wave intervention (reminder under the same assignment)

This design is not a stepped-wedge design. Rather, it is a two-wave intervention design with an initial contact in August and a reminder in November, both following the same cluster assignment.

4.5 Intervention Content

The intervention consists of leaflet inserts distributed through the city newsletter.

Standard leaflet. The standard leaflet includes:

- basic information about the conversion subsidy program,
- eligibility and consultation contact information,
- a simple explanation of procedures,
- the message that consultation alone is acceptable,
- an explanation that procedures must be completed before construction starts,
- and short Q&A-style clarifications.

Enhanced leaflet. The enhanced leaflet includes all content in the standard leaflet, plus:

- a simple planning prompt asking households to consider when they will consult,
- options regarding who will consult (the person themselves or a family member),
- a short prompt to think about the timing of consultation.

The purpose of the enhanced leaflet is not to impose a strong persuasive message, but to add a light planning prompt (i.e., an implementation-intention prompt) that may reduce procrastination.

4.6 Reminder Interpretation in November

The November distribution is interpreted as a **cumulative second contact** (reminder) under the same randomized assignment:

- clusters assigned to the standard arm receive the standard reminder leaflet,
- clusters assigned to the enhanced arm receive the enhanced reminder leaflet.

The main analysis will interpret August and November together as cumulative treatment exposure. A supplementary short-run analysis may separately examine outcomes between the August distribution and the November reminder.

4.7 Hypothesized Behavioral Mechanism

The hypothesized pathway is:

> Information provision $\rightarrow$ better awareness of where to consult $\rightarrow$ partial reduction in uncertainty about procedures and subsidies $\rightarrow$ consultation with the City $\rightarrow$ contractor coordination and cost estimation $\rightarrow$ pre-construction subsidy application $\rightarrow$ construction start $\rightarrow$ project completion

In practice, contractor coordination and subsidy application often occur in close succession. Thus, subsidy application is interpreted as a downstream action reflecting a relatively advanced stage of decision-making.

The enhanced leaflet is expected to work mainly by prompting households to form a more concrete plan about when to consult the City, thereby reducing procrastination.

5 Data

5.1 Administrative Baseline Data

The City will provide anonymized household-level administrative data with research IDs. Expected variables include:

- research household ID,
- administrative district ID,
- area / cluster ID,
- sewer-service-area classification relevant to sample construction and exclusion rules,
- current wastewater treatment type,
- household characteristics,
- septic-tank registry information where available,
- and prior related consultation records where available.

5.2 Behavioral Administrative Records

Household-level administrative records will be used to identify the dates of:

- consultations and inquiries,
- the first pre-construction subsidy application,
- construction start,
- and other conversion-related administrative milestones where available.

In addition, for the Combined Septic Tank Conversion RCT, the study expects to use information from the administrative subsidy execution ledger for fiscal years 2026 and 2027, where available and linkable to the research household ID or an equivalent management identifier. These records may include the dates of pre-construction subsidy application, order/authorization, construction start, scheduled completion, and final submission, as well as subsidy amount components such as the main subsidy amount, area-based add-ons, removal-related amounts, plumbing-related amounts, and the total grant amount.

These ledger-based variables are intended primarily to improve measurement of administrative process milestones and to support exploratory process-tracing analyses. They do not alter the definition of the pre-specified primary outcome, which remains the time until the first pre-construction subsidy application.

Where administratively available, contractor-related records or cost-estimate-related records may also be used as supplementary behavioral information, but these are not treated as core administrative outcomes unless they are consistently observed.

The baseline period begins in April 2026. The initial target data collection period extends through March 2027, and, if possible, will be extended through March 2028 to capture medium-run outcomes such as application, construction progress, and completion-related administrative milestones.

5.3 Consultation Log Data

To capture mechanisms and consultation content, the study will use a consultation log in which one row corresponds to one consultation.

Key variables include:

- household ID,
- date of consultation,
- mode of consultation,
- staff ID,
- consultant category (e.g., self, family member, proxy),
- trigger of consultation,
- information learned from family or neighbors,
- whether the leaflet was seen,
- how the leaflet was encountered,
- whether the enhanced planning prompt was noticed, where applicable,
- pre-consultation concerns,
- consultation content,

- consultation level,
- contractor-related information observed at the time of consultation,
- whether contractor involvement appears to have preceded City consultation,
- whether a contractor had contacted the City regarding the household or case,
- next steps,
- post-consultation remaining concerns,
- and a research exclusion flag.

These consultation logs are used mainly for mechanism analysis and supplementary interpretation rather than as the sole source of primary outcomes. The consultation log is distinct from the supplementary consultation-time record described below.

5.4 Consultation-Time Record Data

As a supplementary implementation record, the study may also use a simple consultation-time record for telephone and in-person consultations during pre-specified recording windows only. This record is intended to capture the approximate administrative burden associated with implementing the intervention and to provide descriptive evidence on its practical feasibility and scalability. It is not intended for strict personnel management, productivity measurement, or detailed workflow analysis.

Where feasible, the record may include:

- record date,
- approximate consultation start time,
- approximate consultation end time,
- approximate consultation duration,
- a simple staff-assessed complexity category (simple / standard / complex),
- household management number when readily identifiable,
- and, when household linkage is not available, consultation mode and consultation type.

These records are supplementary to the main consultation log. Approximate recording is acceptable; second-level precision is not required, and if exact start or end times are unclear, approximate duration may still be recorded. These data will be used descriptively to characterize implementation burden and feasibility, and will not be treated as primary outcomes, key secondary outcomes, or mechanism variables.

6 Outcome Definitions

6.1 Primary Outcome

The **primary outcome** is the **time until the first pre-construction subsidy application**.

This outcome is used because it is a meaningful administrative action that reflects a relatively advanced stage of concrete preparation for conversion, and because it can be comparatively reliably observed in administrative data.

In addition, whether a household submitted its first subsidy application within 3, 6, and 12 months after distribution will be reported as complementary probability-based analyses.

6.2 Key Secondary Outcomes

The key secondary outcomes are:

- time until first consultation with the City,
- time until construction start.

Because subsidy application is a relatively downstream behavior, consultation with the City is treated as a particularly important secondary outcome for capturing earlier behavioral responses to the information intervention.

6.3 Mechanism Indicators

The following variables are treated as mechanism indicators:

- contractor-related involvement observed in consultation records,
- whether contractor involvement appears to have preceded consultation with the City,
- consultation level,
- post-consultation concerns,
- whether the leaflet was seen,
- how the leaflet was encountered,
- whether the enhanced planning prompt was noticed,
- whether the planning prompt led the household to consider the timing of consultation, where observable,
- family- or neighbor-mediated information pathways.

These indicators are used to complement the main estimates and to study mechanisms, and are not treated as primary outcomes.

6.4 Exploratory Outcomes

Exploratory outcomes include:

- administrative milestones related to the subsidy process and project completion,
- order/authorization date, where available in administrative records,
- scheduled completion and final submission milestones, where available,
- subsidy payment or related payment-processing records,
- subsidy amount components and total grant amount, where available,
- final conversion completion,
- cluster-level consultation and application rates,
- and supplementary indicators related to spillovers.

These outcomes are exploratory because they are either further downstream than the primary outcome, not uniformly observed for all households, or potentially conditioned on later stages of administrative processing. They are used to supplement interpretation of the main results rather than to redefine the core estimands of the study.

7 Estimation Strategy

7.1 Main Estimation and Main Analysis

The main estimation is the **intent-to-treat (ITT)** effect of assignment to the enhanced leaflet arm, relative to assignment to the standard leaflet arm, on the timing of the first pre-construction subsidy application.

The main analysis will use a household-by-month panel and estimate a **discrete-time hazard model** in which the outcome is whether the household submits its first subsidy application in month t.

The main specification will include:

- treatment assignment,
- month fixed effects,
- pre-specified covariates,
- and cluster-robust standard errors at the reconstituted-cluster level.

Because treatment is assigned at the cluster level and does not vary within cluster over time, the main specification will not include cluster fixed effects in the primary hazard model.

The main treatment effect of interest is the effect of assignment to the enhanced arm on the monthly hazard of first subsidy application. The pre-specified covariates may include household treatment-status type, district indicators, and other baseline variables defined before outcome analysis using the frozen roster.

The primary conclusions of the study will be based on this pre-specified main analysis of the primary outcome. Additional administrative process measures and implementation-burden records introduced elsewhere in the PAP are used to improve interpretation and descriptive policy relevance, but they do not change the definition of the main estimand or the hierarchy of outcomes.

The main observation window is **12 months after leaflet distribution**. Supplementary short-run analyses will also examine 3-month and 6-month windows. If data are extended, exploratory analyses may consider a 24-month window.

In the main analysis, the August distribution and the November reminder will be treated as **cumulative treatment exposure** under the same assignment. Supplementary analyses may separately examine the short-run period between the August leaflet and the November reminder.

As a complementary design-based robustness check, the study will report randomization-based or permutation-based inference where feasible, given the cluster-randomized design and the final number of clusters.

7.1.1 Complementary Probability-Difference Analysis

As a complementary and more interpretable specification, the study will estimate linear probability models (LPMs) for whether a household submitted its first subsidy application within 3, 6, and 12 months after leaflet distribution.

7.1.2 Exploratory Count Analysis (Poisson / Negative Binomial)

As exploratory analyses, the study will use cluster-by-month aggregated counts of consultations and subsidy applications.

These count analyses will be conducted using a Poisson specification with the number of target households as an offset. Here, the offset will be defined using the cluster-level number of eligible target households in the frozen roster. If overdispersion is substantial, negative binomial specifications will also be estimated. These analyses are exploratory and used mainly for robustness and descriptive interpretation.

7.2 Subgroup Analysis

The study pre-specifies the following heterogeneity analyses:

- single-treatment septic tank households vs. night-soil collection households,
- elderly-related households,
- households with family-mediated consultation,
- households in which contractor involvement appears to have preceded consultation with the City.

These subgroup analyses will be implemented by adding interaction terms between treatment assignment and subgroup indicators. They are intended to complement the main analysis and will be interpreted cautiously, with greater emphasis on point estimates and confidence intervals than on statistical significance alone.

7.3 Missing Data and Data Construction

(1) Administrative behavioral records. If consultation, application, construction start, or completion-related records are not present for a given period, those actions will in principle be treated as not having occurred, provided that the records are ordinarily collected according to standard administrative procedures. However, irregularities such as sudden breaks in monthly records or unusual spikes in unidentified consultations will be checked.

(2) Partial missingness in consultation logs. For consultation log items, missing entries will be distinguished where possible between:

- No response: the resident declined to answer,
- Not confirmed: the staff member did not ask or could not confirm,
- Do not remember: the resident was asked but did not remember,
- Unknown: the status itself remained unknown or could not be determined.

These categories may be treated separately in descriptive analysis or as missing values depending on the context.

(3) Consultations without household IDs. Consultations that cannot be linked to a household ID will be recorded where possible using auxiliary identifiers such as area or date. They will not be used in the main household-level analysis if exact linkage is impossible, but may be used in descriptive cluster-level summaries.

(4) Research exclusion (opt-out). If a household requests not to be included in the research analysis, routine administrative records will still be maintained for administrative purposes, but those observations will be flagged and excluded from the research dataset. The number of such exclusions will be reported descriptively.

(5) Updates to cluster or area information. The main analysis will rely on the frozen roster used to define clusters and treatment assignment. If subsequent administrative corrections occur, they will be handled using pre-specified rules and, where relevant, addressed in robustness checks.

(6) Implementation fidelity and deviations. To verify whether intervention implementation followed the randomized assignment, the study will record, where feasible:

- planned distribution clusters,

- actual distribution dates,
- distribution counts,
- any non-distribution, delay, or replacement,
- whether the distributed leaflet version matched the assigned arm,
- whether monthly consultation logs and behavioral records were compiled and provided on the planned schedule.

Major deviations from planned implementation will be documented descriptively. The main analysis will nevertheless remain ITT-based.

(7) Implementation costs. Where feasible, descriptive records will be kept on implementation costs such as:

- printing volume and printing cost,
- any incremental distribution expenses,
- approximate additional staff time,
- and, during pre-specified recording windows, approximate consultation handling time recorded through a simple supplementary consultation-time record.

These records are included for descriptive policy relevance and implementation feasibility rather than for a full formal cost-benefit analysis. The consultation-time record is approximate in nature and is not intended for strict personnel management or detailed workflow monitoring.

(8) GIS-based supplementary measures. GIS-based indicators such as adjacency or distance between clusters may be used only in supplementary analyses related to spillovers and information diffusion, and will not be part of the core individual-level estimators.

(9) Supplementary spillover analysis. Potential spillovers through family members, neighbors, and geographically adjacent clusters will be assessed descriptively using consultation logs and available supplementary information. Because strict household-level identification of such spillovers may be difficult, these analyses will be treated as supplementary rather than central.

(10) Reproducibility. All data cleaning, variable construction, sample creation, and analysis procedures will be coded in a reproducible manner. Researchers will only access de-identified data with research IDs and will not receive direct personal identifiers.

(11) Administrative subsidy-ledger fields. For subsidy-ledger variables such as order/authorization date, scheduled completion date, final submission date, and subsidy amount components, the researcher will preserve the administrative meaning of the original fields as closely as possible. During data cleaning, particular attention will be paid to whether blank cells represent "no event yet," "not recorded," or "not applicable." Likewise, for amount variables, the distinction among zero, blank, and non-applicable values will be preserved where administratively identifiable. These variables are used primarily for exploratory process-tracing and descriptive interpretation.

(12) Approximate consultation-time records. The supplementary consultation-time record is intentionally approximate and collected only during pre-specified recording windows. Measurement error in these records is therefore expected. For that reason, consultation-time variables will be used descriptively to summarize implementation burden and feasibility and will not be interpreted as precise measures of worker productivity or as core behavioral outcomes of residents.

8 Sample Size and Statistical Power

The final number of clusters and eligible households, including the numbers of single-treatment septic tank households and night-soil collection households, will be determined after the frozen roster is received.

Because the outcome of primary interest (pre-construction subsidy application) is likely to be relatively rare, formal power calculations or minimum-detectable-effect calculations will be updated after the frozen roster is received and before examining post-treatment outcomes. The study will therefore place emphasis not only on statistical significance but also on the magnitude of point estimates and the width of confidence intervals. Furthermore, because the study is cluster-randomized, statistical power will depend importantly on the final number of clusters, the distribution of eligible households across clusters, and the baseline incidence of subsidy applications.

9 Pre-Registration

This study will be registered in the AEA RCT Registry before intervention begins. Relevant materials may also be archived on OSF where appropriate.

The pre-registration will include:

- the research objective,
- intervention content,
- primary and secondary outcomes,
- the unit of randomization,
- and the analysis plan.

For reproducibility, the project will also distinguish and manage:

- raw received files,
- cleaned analytical datasets,
- data-cleaning code,
- randomization code,
- analysis code,
- figure and table generation code,
- and the codebook.

10 Research Ethics

- Researchers will not receive direct personal identifiers such as names or addresses.
- The City will retain the correspondence table linking administrative identities to research IDs; researchers will not have access to that table.
- Researchers will not attempt re-identification.
- The study will use de-identified data with research IDs and consultation logs.
- Households that request exclusion from research use will be excluded from the analytical sample.
- Consultation, application, and all administrative procedures will proceed as usual regardless of research participation.
- The study will be conducted after approval by the relevant institutional ethics review process.
- Public reporting will be done only in aggregate form, without identifying individual households.

11 Limitations and Caveats

- Final cluster definitions and treatment assignment will be determined after the frozen roster is received.
- The intervention schedule assumes distributions in August 2026 and November 2026.
- Because conversion is a high-cost and high-friction action, short-run effects on downstream outcomes may be small.
- The timing of behavioral data provision depends on coordination with the City; at minimum, records through March 2027 will be sought, and extension through March 2028 will be requested where possible.

- The enhanced planning prompt cannot be perfectly observed as a completed written action; recognition and use may only be partially captured through consultation logs.
- Implementation cost and fidelity measures are necessarily approximate and based on feasible administrative recording.

12 Planned Main Tables and Figures

The study plans to produce at least the following tables and figures:

Tables

- Table 1: Descriptive statistics and pre-treatment balance
- Table 2: Main estimates for the primary outcome
- Table 3: Estimates for key secondary outcomes
- Table 4: Heterogeneity analysis
- Table 5: Implementation fidelity, implementation feasibility, and implementation cost summary, including descriptive consultation-time records where available

Figures

- Figure 1: Study design and analytical sample flow
- Figure 2: Monthly consultation rates or consultation counts
- Figure 3: Monthly subsidy application rates or application counts
- Figure 4: Cumulative application curves or event-time style supplementary figure, where appropriate

The final composition of tables and figures may be adjusted after data cleaning, but the distinction between primary outcomes, secondary outcomes, mechanism indicators, and implementation information will be maintained.

13 Appendices

- Appendix A: Proposed cluster definition
- Appendix B: English Rendering of the Intervention Flyers
- Appendix C: Data request form
- Appendix D: Data request specification

- Appendix E: Consultation log form
- Appendix F: Research timeline
- Appendix G: Implementation cost and implementation record sheet, including the supplementary consultation-time record form, if available

A Cluster Construction and Assignment Procedure

Cluster Construction and Assignment Procedure[1]
Prepared for the PAP (ver.1.0)

The Combined Septic Tank Conversion RCT uses clusters constructed from *aza* (small administrative areas) as the basic geographic units. Cluster construction is conducted before formal assignment according to pre-specified rules designed to balance four considerations simultaneously: geographic contiguity, administrative coherence, avoidance of extremely small clusters, and preservation of a sufficiently large number of clusters for statistical inference. Non-contiguous merging is avoided in principle.

For cluster construction and assignment, the relevant size measure is the number of households in the frozen roster that are classified as using either a single-treatment septic tank or night-soil collection and are not excluded under the pre-specified sample-construction rules. *Aza* with zero such households are excluded from the assignment population. Remaining small units are then merged in stages according to pre-specified adjacency rules. As a general principle, *aza* with fewer than 10 eligible households are merged with adjacent units when a natural contiguous merge is available, and *aza* with 10–19 eligible households are also merged in the next stage under the same principle. The purpose of this procedure is to reduce extremely small units while avoiding geographically unnatural or operationally impractical clusters. If no natural merge partner exists, or if merging would create an excessively large or otherwise clearly inappropriate cluster, exceptional standalone retention is permitted and documented.

The pre-specified adjacency rule distinguishes ordinary shared-boundary adjacency from cases with strong physical or practical separation and does not treat vertex-only contact as ordinary adjacency. The researcher finalizes these rules before receipt of the frozen roster and does not revise them afterward. Trial runs conducted before formal assignment are used only to confirm that the pre-specified rules operate as intended and to identify residual ambiguities in implementation; they are not used to search for a favorable realized allocation.

Formal assignment is conducted only once, using the frozen household roster provided by the City as of the pre-specified reference date. After the final set of reconstituted clusters is determined, clusters are assigned once according to the pre-specified experimental design, and the later reminder distribution follows the same cluster assignment. The assignment procedure imposes pre-specified hard constraints on the total number of clusters assigned to each group and on district-level allocations. Among allocations satisfying these constraints, candidate allocations are evaluated using pre-specified balance metrics, including cluster size and baseline cluster-level measures related to septic-tank conversion.

The balance criteria are based exclusively on information available prior to treatment and available at the time of assignment. These include district indicators, the number of eligible households in each reconstituted cluster, the composition of eligible households, and, where available at the time of assignment, historical administrative records on subsidy applications or conversion-related activity from earlier years. Because prior septic-tank outreach by the City consisted mainly of

[1] This appendix is a research-oriented English version prepared for the PAP. This document is prepared as a supporting appendix to the PAP for the Combined Septic Tank Conversion RCT.

citywide general publicity rather than household-specific encouragement, the assignment procedure does not rely on cluster-specific BAU outreach intensity measures analogous to those used in the sewer-connection study.

The exact final number of clusters is not fixed ex ante. Rather, it is determined by the application of the pre-specified cluster-construction rules to the frozen roster, with priority given to geographically natural and administratively coherent clusters. All cluster merges, exceptions, and final assignments are recorded in a pre-specified implementation log, together with the information necessary to reproduce the final assignment. A more detailed implementation protocol is pre-specified before receipt of the frozen roster and retained by the researcher as the internal record of assignment procedures.

B English Rendering of the Intervention Flyers

This appendix provides an English rendering of the four flyer versions used in the Combined Septic Tank Conversion RCT in Date City. The Japanese originals were the actual materials prepared for distribution to residents. The English text below is provided for the PAP and related research documentation. Minor adjustments have been made for clarity, consistency, and readability in English while preserving the substantive content of the actual intervention materials and the intended differences across treatment arms.

The four versions correspond to the following intervention arms:

- August flyer: Standard version
- August flyer: Enhanced version
- November flyer: Standard reminder version
- November flyer: Enhanced reminder version

The August flyers were used for the initial contact, whereas the November flyers were used as reminder versions based on the same treatment assignment. Apart from minor wording and formatting differences necessary for natural presentation, the substantive treatment difference between the standard and enhanced versions is concentrated in the short consultation-planning memo included only in the enhanced version.

B1. August Flyer: Standard Version

Guidance on Conversion to a Combined Septic Tank

For households using a single-treatment septic tank or night-soil collection in areas where the sewer system is not available

Thank you for your continued understanding and cooperation with the City.

This notice is for households in areas where the sewer system is not available and that currently use a single-treatment septic tank or night-soil collection. Date City would like to provide information about conversion to a combined septic tank and the related subsidy program.

Please feel free to contact the Water and Sewerage Division of Date City first. Consultations are also accepted by phone.

1. It is perfectly fine to consult the City even if you have not decided to proceed with construction.
2. City staff can explain the subsidy program and the overall steps in the procedure.
3. Estimated costs and the likely construction schedule can also be discussed with a septic-tank contractor, if needed.

Important: Procedures must be completed **before construction starts** in order to use the subsidy program.

You may also consult a contractor directly. If you are unsure about the subsidy or the procedures, please contact the City first.

Contact for consultation

Water and Sewerage Division, Date City
Tel: 024-573-5059
Office hours: Weekdays, 9:00 a.m. to 5:00 p.m. (excluding City holidays)
Date City Hall Main Building
180 Funabashi, Hobara-machi, Date City, Fukushima 960-0692
In-person consultation is also available.

Example of what to say on the phone

"I would like to consult about conversion to a combined septic tank. I would like to know about the subsidy and the steps in the procedure. I would also like to confirm whether my household may be eligible for the subsidy."

If possible, please tell us your area (*aza*). It is fine if you only know it approximately. A family member may also contact the City on your behalf.

Illustrative flow

1. Consult the City 2. Obtain an estimate from a contractor 3. Apply for the subsidy 4. Start construction

Questions and answers

Q. If I consult the City, do I have to carry out the conversion work?

No. Consultation does not mean that you are committing to construction. It is fine to begin by simply confirming your situation.

Q. What should I tell the City when I consult them?

It is sufficient to explain, to the extent you know, where you live and the current condition of your toilet and wastewater system.

Q. How much subsidy can I receive?

The subsidy amount varies depending on the type of conversion, whether the project is associated with new construction, and whether additional eligible work such as removal or indoor plumbing is involved. Please contact the City for details.

Q. Can I apply for the subsidy after construction has already started?

No. Procedures must be completed before construction starts in order to use the subsidy program. You may contact the City even before deciding on the construction work.

Q. Can older residents complete the procedures?

Yes. A family member may consult or complete procedures on behalf of the resident.

Summary

Consultation does not mean application or commitment. It is perfectly fine to start by confirming your situation.

Research notice

To make City guidance easier to understand, Date City will compile information from inquiries and consultations, and anonymized records may be used for research conducted in cooperation with the Eiji Satoh Laboratory at Fukushima University. When information is shared outside the City, it will not be in a form that identifies individuals by name or address. Residents may occasionally be asked brief questions in the course of ordinary administrative consultations, but responses are voluntary. Consultation, application, and administrative procedures will proceed as usual regardless of whether a resident cooperates with the research. Residents who do not wish their information to be used for research may contact the Water and Sewerage Division.

B2. August Flyer: Enhanced Version

Guidance on Conversion to a Combined Septic Tank

For households using a single-treatment septic tank or night-soil collection in areas where the sewer system is not available

Thank you for your continued understanding and cooperation with the City.

This notice is for households in areas where the sewer system is not available and that currently use a single-treatment septic tank or night-soil collection. Date City would like to provide information about conversion to a combined septic tank and the related subsidy program.

Please feel free to contact the Water and Sewerage Division of Date City first. Consultations are also accepted by phone.

1. It is perfectly fine to consult the City even if you have not decided to proceed with construction.
2. City staff can explain the subsidy program and the overall steps in the procedure.
3. Estimated costs and the likely construction schedule can also be discussed with a septic-tank contractor, if needed.

Important: Procedures must be completed **before construction starts** in order to use the subsidy program.

You may also consult a contractor directly. If you are unsure about the subsidy or the procedures, please contact the City first.

Contact for consultation

Water and Sewerage Division, Date City
Tel: 024-573-5059
Office hours: Weekdays, 9:00 a.m. to 5:00 p.m. (excluding City holidays)
Date City Hall Main Building
180 Funabashi, Hobara-machi, Date City, Fukushima 960-0692
In-person consultation is also available.

Example of what to say on the phone

"I would like to consult about conversion to a combined septic tank. I would like to know about the subsidy and the steps in the procedure. I would also like to confirm whether my household may be eligible for the subsidy."

If possible, please tell us your area (*aza*). It is fine if you only know it approximately. A family member may also contact the City on your behalf.

Illustrative flow

1. Consult the City 2. Obtain an estimate from a contractor 3. Apply for the subsidy 4. Start construction

Questions and answers

Q. If I consult the City, do I have to carry out the conversion work?

No. Consultation does not mean that you are committing to construction. It is fine to begin by simply confirming your situation.

Q. What should I tell the City when I consult them?

It is sufficient to explain, to the extent you know, where you live and the current condition of your toilet and wastewater system.

Q. How much subsidy can I receive?

The subsidy amount varies depending on the type of conversion, whether the project is associated with new construction, and whether additional eligible work such as removal or indoor plumbing is involved. Please contact the City for details.

Q. Can I apply for the subsidy after construction has already started?

No. Procedures must be completed before construction starts in order to use the subsidy program. You may contact the City even before deciding on the construction work.

Q. Can older residents complete the procedures?

Yes. A family member may consult or complete procedures on behalf of the resident.

It may be helpful to think about when to contact the City

Consultation planning memo

(For your reference only. You do not need to write anything.)

I plan to consult the City:

☐ this month ☐ next month ☐ after the New Year (January–March) ☐ undecided

The consultation will be made by:

☐ myself ☐ a family member

Summary

Consultation does not mean application or commitment. It is perfectly fine to start by confirming your situation.

Research notice

To make City guidance easier to understand, Date City will compile information from inquiries and consultations, and anonymized records may be used for research conducted in cooperation with the Eiji Satoh Laboratory at Fukushima University. When information is shared outside the City, it will not be in a form that identifies individuals by name or address. Residents may occasionally be asked brief questions in the course of ordinary administrative consultations, but responses are voluntary. Consultation, application, and administrative procedures will proceed as usual regardless of whether a resident cooperates with the research. Residents who do not wish their information to be used for research may contact the Water and Sewerage Division.

B3. November Flyer: Standard Reminder Version

Reminder on Conversion to a Combined Septic Tank

For households using a single-treatment septic tank or night-soil collection in areas where the sewer system is not available

Thank you for your continued understanding and cooperation with the City.

This notice is for households in areas where the sewer system is not available and that currently use a single-treatment septic tank or night-soil collection. Before the year-end and New Year period, Date City would like to remind residents about consultation concerning conversion to a combined septic tank and the related subsidy program.

Please feel free to contact the Water and Sewerage Division of Date City first. Consultations are also accepted by phone.

1. It is perfectly fine to consult the City even if you have not decided to proceed with construction.
2. City staff can explain the subsidy program and the overall steps in the procedure.
3. Estimated costs and the likely construction schedule can also be discussed with a septic-tank contractor, if needed.

Important: Procedures must be completed **before construction starts** in order to use the subsidy program.

You may also consult a contractor directly. If you are unsure about the subsidy or the procedures, please contact the City first.

Contact for consultation

Water and Sewerage Division, Date City
Tel: 024-573-5059
Office hours: Weekdays, 9:00 a.m. to 5:00 p.m. (excluding City holidays)
Date City Hall Main Building
180 Funabashi, Hobara-machi, Date City, Fukushima 960-0692
In-person consultation is also available.

Example of what to say on the phone

"I would like to consult about conversion to a combined septic tank. I would like to know about the subsidy and the steps in the procedure. I would also like to confirm whether my household may be eligible for the subsidy."

If possible, please tell us your area (*aza*). It is fine if you only know it approximately. A family member may also contact the City on your behalf.

Illustrative flow

1. Consult the City 2. Obtain an estimate from a contractor 3. Apply for the subsidy 4. Start construction

Questions and answers

Q. If I consult the City, do I have to carry out the conversion work?

No. Consultation does not mean that you are committing to construction. It is fine to begin by simply confirming your situation.

Q. What should I tell the City when I consult them?

It is sufficient to explain, to the extent you know, where you live and the current condition of your toilet and wastewater system.

Q. How much subsidy can I receive?

The subsidy amount varies depending on the type of conversion, whether the project is associated with new construction, and whether additional eligible work such as removal or indoor plumbing is involved. Please contact the City for details.

Q. Can I apply for the subsidy after construction has already started?

No. Procedures must be completed before construction starts in order to use the subsidy program. You may contact the City even before deciding on the construction work.

Q. Can older residents complete the procedures?

Yes. A family member may consult or complete procedures on behalf of the resident.

Summary

Consultation does not mean application or commitment. It is perfectly fine to start by confirming your situation.

Research notice

To make City guidance easier to understand, Date City will compile information from inquiries and consultations, and anonymized records may be used for research conducted in cooperation with the Eiji Satoh Laboratory at Fukushima University. When information is shared outside the City, it will not be in a form that identifies individuals by name or address. Residents may occasionally be asked brief questions in the course of ordinary administrative consultations, but responses are voluntary. Consultation, application, and administrative procedures will proceed as usual regardless of whether a resident cooperates with the research. Residents who do not wish their information to be used for research may contact the Water and Sewerage Division.

B4. November Flyer: Enhanced Reminder Version

Reminder on Conversion to a Combined Septic Tank

For households using a single-treatment septic tank or night-soil collection in areas where the sewer system is not available

Thank you for your continued understanding and cooperation with the City.

This notice is for households in areas where the sewer system is not available and that currently use a single-treatment septic tank or night-soil collection. Before the year-end and New Year period, Date City would like to remind residents about consultation concerning conversion to a combined septic tank and the related subsidy program.

Please feel free to contact the Water and Sewerage Division of Date City first. Consultations are also accepted by phone.

1. It is perfectly fine to consult the City even if you have not decided to proceed with construction.
2. City staff can explain the subsidy program and the overall steps in the procedure.
3. Estimated costs and the likely construction schedule can also be discussed with a septic-tank contractor, if needed.

Important: Procedures must be completed **before construction starts** in order to use the subsidy program.

You may also consult a contractor directly. If you are unsure about the subsidy or the procedures, please contact the City first.

Contact for consultation

Water and Sewerage Division, Date City
Tel: 024-573-5059
Office hours: Weekdays, 9:00 a.m. to 5:00 p.m. (excluding City holidays)
Date City Hall Main Building
180 Funabashi, Hobara-machi, Date City, Fukushima 960-0692
In-person consultation is also available.

Example of what to say on the phone

"I would like to consult about conversion to a combined septic tank. I would like to know about the subsidy and the steps in the procedure. I would also like to confirm whether my household may be eligible for the subsidy."

If possible, please tell us your area (*aza*). It is fine if you only know it approximately. A family member may also contact the City on your behalf.

Illustrative flow

1. Consult the City 2. Obtain an estimate from a contractor 3. Apply for the subsidy 4. Start construction

Questions and answers

Q. If I consult the City, do I have to carry out the conversion work?

No. Consultation does not mean that you are committing to construction. It is fine to begin by simply confirming your situation.

Q. What should I tell the City when I consult them?

It is sufficient to explain, to the extent you know, where you live and the current condition of your toilet and wastewater system.

Q. How much subsidy can I receive?

The subsidy amount varies depending on the type of conversion, whether the project is associated with new construction, and whether additional eligible work such as removal or indoor plumbing is involved. Please contact the City for details.

Q. Can I apply for the subsidy after construction has already started?

No. Procedures must be completed before construction starts in order to use the subsidy program. You may contact the City even before deciding on the construction work.

Q. Can older residents complete the procedures?

Yes. A family member may consult or complete procedures on behalf of the resident.

It may be helpful to think about when to contact the City

Consultation planning memo

(For your reference only. You do not need to write anything.)

I plan to consult the City:

☐ November ☐ December ☐ after the New Year (January–March) ☐ undecided

The consultation will be made by:

☐ myself ☐ a family member

Summary

Consultation does not mean application or commitment. It is perfectly fine to start by confirming your situation.

Research notice

To make City guidance easier to understand, Date City will compile information from inquiries and consultations, and anonymized records may be used for research conducted in cooperation with the Eiji Satoh Laboratory at Fukushima University. When information is shared outside the City, it will not be in a form that identifies individuals by name or address. Residents may occasionally be asked brief questions in the course of ordinary administrative consultations, but responses are voluntary. Consultation, application, and administrative procedures will proceed as usual regardless of whether a resident cooperates with the research. Residents who do not wish their information to be used for research may contact the Water and Sewerage Division.

C Request for Data Provision

Request for Data Provision
For the Combined Septic Tank Conversion RCT only[2]
Prepared for the PAP (ver.1.0)
To: Date City Waterworks and Sewerage Division

C1. Purpose of this request

In order to conduct a randomized controlled trial (RCT) evaluating the effects of information provision for promoting conversion from single-treatment septic tanks to combined septic tanks in Date City, it is necessary to understand household characteristics as well as behaviors such as consultations, contractor-related records, including estimate-related records where administratively available, and subsidy applications, and to conduct scientific analyses that can inform policy improvement.

This document requests the provision of management-number-based household-level data and consultation logs recorded during the implementation period of the RCT. The researcher will not receive any personally identifiable information such as names or addresses.

C2. Data requested

For each household in Date City, we kindly request the provision of the items below. All data should be provided based on management numbers, with personal information removed.

[2] This appendix is a research-oriented English version prepared for the PAP. The requested data items and administrative requests are based on the Japanese data request letter submitted to Date City. This document is prepared as a supporting appendix to the PAP for the Combined Septic Tank Conversion RCT.

A. Household master data

Item	Description
Management number	Management number assigned by the City (identifier that does not contain personal information)
Oaza/Koaza ID	Area code or name at the small-area level
Administrative district ID	Area code or name at the administrative district level
Household size	Number of household members
Land-use category	Code for land-use category
Wastewater treatment category	Code for wastewater treatment category

If an anonymized household ID is already in use, it may also be included provided that it can be linked consistently to the management number.

B. Data required for the Combined Septic Tank Conversion RCT

Item	Description
Septic tank ledger number	Ledger number for the septic tank, if available
Pre-construction subsidy application history	Past applications for septic tank subsidies
Household-level behavioral history	Dates of consultations/inquiries to the City, estimate-related actions where administratively available, pre-construction subsidy applications, construction starts, payment-related milestones where available, and completion of conversion
Administrative subsidy execution ledger (FY2026 and FY2027)	Administrative records related to the subsidy process, where available and linkable to the management number or another equivalent identifier. These may include the pre-construction subsidy application date, order/authorization date, construction start date, scheduled completion date, final submission date, and subsidy amount components such as the main subsidy amount, area-based add-ons, removal-related amounts, plumbing-related amounts, and the total grant amount
Consultation log	Consultation-level records (see Section C below)
Supplementary consultation-time record	Approximate consultation-time records for telephone and in-person consultations during pre-specified recording windows, used only as a supplementary implementation record where feasible

C. Items requested in the consultation log (one row per consultation)

For the consultation log, we kindly request that one row be recorded for each consultation. Because multiple topics may arise in a single consultation, multiple selections may be allowed where appropriate. The main requested items are as follows:

- Consultation ID
- Management number (if known)
- Date of consultation
- Reception channel
- Staff ID handling the consultation (anonymous code)
- Respondent category
- Oaza/Koaza ID
- Administrative district ID
- Area classification relevant to program eligibility
- Current wastewater treatment status
- Trigger of the consultation
- If prompted by family or neighbors, what information they heard
- Whether the flyer was seen
- The main concern before consultation
- Consultation topics
- Consultation level (staff judgment)
- Contractor-related information observed at the time of consultation (e.g., whether contractor involvement appears to have preceded City consultation, whether a contractor had contacted the City, and the stage of contractor-related progress)
- Next step (staff judgment)
- Level of concern after consultation
- Clarity of the action pathway
- Research exclusion (opt-out)

Detailed consultation-log items and input procedures are specified in the attached "Data Provision Specification" and "Consultation Manual."

C3. Data format

We would appreciate it if the data could be provided in the following format.

1. **Household master data (household level)**
   One row per household; one column per variable
   Primary key: management number

2. **Behavioral history (household level)**
   One row per household; one column per event-date field
   Linked to the household master by management number

3. **Administrative subsidy execution ledger data**
   One row per household or one row per subsidy-related case, depending on administrative practice
   Linkable to the household master by management number or another equivalent identifier whenever feasible

4. **Consultation log (consultation level)**
   One row per consultation; one column per variable
   Linked to the household master by management number whenever identifiable

5. **Supplementary consultation-time record**
   One row per consultation-time record during the pre-specified recording windows only
   This may be provided either as a separate worksheet or as a separate file

If the management number is unknown, the relevant field may be left blank; if possible, Oaza/Koaza ID and administrative district ID may be used as supplementary information.

Please provide the data in Excel format. As a rule, it would be helpful if the workbook were organized into separate sheets such as "Household Master," "Behavioral History," "Subsidy Ledger," "Consultation Log," and, where used, "Consultation-Time Record." If this is difficult in practice, separate files are also acceptable. If possible, please also attach item descriptions (code list and/or data dictionary).

For updated data during the RCT implementation period, we kindly request monthly submissions on a month-end basis beginning in July 2026.

C4. Requested data coverage period

For the analyses of the combined septic tank conversion RCT, we would like to request data covering the following periods.

(1) **Baseline data**
   Most recent household master data

Household attributes (e.g., land-use category, wastewater treatment category, household size)
Area classification
Management number

(2) **Behavioral history, subsidy-ledger data, and consultation logs during the RCT implementation period**

As a baseline request, we ask that data be provided for the period from April 2026 to March 2027.

- Consultations
- Contractor-related records, including estimate-related records where administratively available
- Pre-construction subsidy applications
- Order/authorization, construction-start, scheduled-completion, final-submission, and related subsidy-process milestones where available
- Payment-related records where available
- Conversion completion records
- Consultation logs (one row per consultation)
- Supplementary consultation-time records during the pre-specified recording windows only, where feasible

(3) **Request for possible extension**

To capture medium- and long-term outcomes such as applications, construction progress, payment-related milestones, and completion, we may ask, if feasible, for the data coverage period to be extended through March 2028.

C5. Protection of personal information

All data will be provided only after personal information has been removed. The researcher will not receive names, addresses, or other personal identifiers. This study will be conducted after approval by the university research ethics review process. Data will be managed strictly and used only for research purposes. Only aggregated results will be reported in papers and reports; no individual household will be identifiable.

If a resident indicates that they do not wish their data to be used for research, ordinary administrative records will still be retained, but a research-exclusion flag will be added so that the researcher can exclude the record from analysis. The correspondence table linking administrative identities to research IDs will be retained by the City, and the researcher will not have access to it.

C6. Burden on the City and support from the researcher

The researcher will respond flexibly to questions about data formats and variable definitions. The study will be designed so as to minimize the administrative burden on the City. The researcher will prepare draft formats for the consultation log, data-entry rules, and code tables. The researcher can also provide explanations at internal municipal meetings if needed.

C7. Contact

Eiji Satoh, Fukushima University
024-548-8452
esatoh@econ.fukushima-u.ac.jp

Sincerely,

D Data Provision Request Specifications

Data Provision Request Specifications
For the Combined Septic Tank Conversion RCT only[3]

D1. Purpose of this document

This document specifies the data items, structure, and delivery format requested from Date City for the Combined Septic Tank Conversion RCT. It is prepared as an appendix to the main pre-analysis plan (PAP) and is intended to ensure consistency between the administrative data actually provided and the outcome definitions, implementation records, and analysis plan described in the PAP.

The requested data are intended to support the analysis of the timing of key actions related to septic tank conversion, especially the timing of the first pre-construction subsidy application, as well as related outcomes such as consultation with the City, contractor-related involvement observable in administrative records or consultation records, construction start, and completion.

This specification applies to:

- historical records already available before the intervention period,
- the updated dataset to be compiled after the household list is finalized, and
- periodic updated data during the RCT implementation and follow-up period.

D2. Basic structure

The data used in this research consist primarily of the following five components:

(A) Household-level baseline data [Required]

(B) Behavioral history at the household level [Required, to the extent available in administrative records]

(C) Administrative subsidy execution ledger data [If available, strongly requested for the Combined Septic Tank Conversion RCT]

(D) Consultation log (consultation-level administrative record) [Required]

(E) Supplementary consultation-time record [Optional, during pre-specified recording windows only]

[3] This appendix is a research-oriented English version prepared for the PAP. The requested data items and administrative requests are based on the Japanese data request letter submitted to Date City. This document is prepared as a supporting appendix to the PAP for the Combined Septic Tank Conversion RCT.

The household-level baseline data, behavioral history, and subsidy-ledger data should be linkable through the administrative management number or another anonymized household identifier that can be consistently mapped to it within the City administration.

The behavioral history and subsidy-ledger data are intended primarily to capture objectively recorded milestones and dates, whereas the consultation log is intended to capture consultation-level process information, including triggers, information routes, concerns, and other mechanism-related variables. The supplementary consultation-time record is intended only to provide an approximate descriptive measure of implementation burden and feasibility.

D3. Household-level baseline data (A)

Basic structure

- One row per household
- One variable per column
- Primary key: administrative management number

Main items

Item	**Description**	**Format (example)**
Administrative management number	Household identifier that does not contain personal information	Numeric or text
Oaza/Aza ID	Area code or area name at the aza level	Numeric or text
Administrative district ID	Area code or area name at the administrative district level	Numeric or text
Household size	Number of household members	Numeric
Land-use category	Land-use category code	Code
Wastewater treatment category	Wastewater treatment category code	Code
Current treatment status	Combined septic tank, single septic tank, night-soil collection, etc.	Code
Eligibility-related administrative classification	Administrative classification relevant to the conversion program, if available	Code
Prior consultation history indicator	Whether the household had consulted the City before the RCT period, if available	0/1 or code
Past subsidy application history indicator	Whether the household had a prior septic tank subsidy application history, if available	0/1 or code

If an anonymized household ID is already used internally, it may also be included, provided that it can be linked to the administrative management number within the City administration.

D4. Household-level event history (B)

Basic structure

- One row per household
- Event dates are managed in columns
- If multiple occurrences exist for the same household, multiple columns may be used as needed (e.g., Consultation Date 1, Consultation Date 2)

Coverage period

- Historical records: as available, preferably from April 2023 to the pre-intervention period
- RCT observation period: from April 2026 to March 2027 as the minimum requested period
- Extended follow-up through March 2028 is strongly preferred, if feasible

Main items

Item	Description	Format (example)
Septic Tank Consultation Date 1	First consultation date with the City	Date
Septic Tank Consultation Date 2	Second consultation date with the City	Date
Pre-construction Subsidy Application Date 1	First date on which a subsidy application was submitted before construction start	Date
Construction Start Date 1	First construction start date	Date
Completion Date 1	First completion date	Date
Payment Date 1	First administratively recorded subsidy payment or related payment-processing date, if available	Date
Application Withdrawn / Incomplete Flag	Indicator for withdrawn, incomplete, or otherwise unprocessed applications, if available	Code or 0/1

Among these items, the *first pre-construction subsidy application date* is particularly important because it corresponds to a substantively meaningful stage at which concrete preparation for conversion has progressed. In practice, this stage often reflects substantial coordination, including communication with contractors, even if the formal submitter may vary across cases. For research purposes, the "pre-construction subsidy application date" should, as far as possible, correspond to the earliest administratively recorded date on which an application related to septic tank conversion was formally received before construction start, regardless of whether the submission was made by the resident or by a contractor on the resident's behalf.

Exact column names may be adjusted to match administrative practice. The researcher will standardize them during data cleaning as needed.
If administratively feasible, the researcher would also appreciate an event-level version of the behavioral history data, with one row per household-event, including the event type and event date. This would improve consistency checks and facilitate time-to-event and process-tracing analyses.

D5. Additional supplemental data [If available]

If available, the following supplemental data would be useful for analysis:

- Past consultation history related to septic tank conversion
- Past subsidy application history related to septic tank conversion
- Septic tank registry number or related administrative identifier
- Area-level or household-level administrative characteristics relevant to implementation
- Records indicating previous encouragement, outreach, or guidance by the City
- Dates or indicators related to contractor coordination, if administratively available
- Administrative processing milestones related to subsidy applications (e.g., receipt, deficiency notice, completion, approval), if available
- Contractor-related dates or records, such as contractor contact, estimate request, or related milestones, if administratively available
- Linkage variables related to the final frozen list, cluster assignment, and stratification, once finalized

These items are not mandatory, but they would be appreciated if they can be provided.

D5A. Administrative subsidy execution ledger data (C)

If administratively available, the researcher strongly requests administrative subsidy execution ledger data for fiscal years 2026 and 2027 for the Combined Septic Tank Conversion RCT.

Basic structure

- One row per household or one row per subsidy-related case, depending on administrative practice
- One variable per column
- Linkable to the household master through the administrative management number or another equivalent anonymized identifier whenever feasible

Main items requested, where available

- Pre-construction subsidy application date
- Order/authorization date
- Construction start date
- Scheduled completion date
- Final submission date
- Main subsidy amount
- Area-based add-ons
- Removal-related amounts
- Plumbing-related amounts
- Total grant amount

These variables are requested primarily to improve measurement of administrative process milestones and to support exploratory process-tracing analyses. They do not alter the definition of the pre-specified primary outcome, which remains the time until the first pre-construction subsidy application.

If possible, the administrative meaning of blank cells should be distinguishable across categories such as "no event yet," "not recorded," and "not applicable." Likewise, for amount variables, it is desirable to preserve the distinction among zero, blank, and non-applicable values whenever administratively identifiable.

D6. Consultation log (D) [Required]

Basic structure

- One row per consultation
- One variable per column
- Linked to the household master by the administrative management number whenever identifiable
- If the administrative management number is unknown, the field may be left blank; if possible, area identifiers such as aza ID or administrative district ID should also be recorded

Main item names / descriptions / format (examples)

Item	**Description**	**Format (example)**
Consultation ID	Sequential number within the consultation log	Numeric or text
Administrative management number	Link key to household master	Numeric or text
Consultation date	Date of consultation/contact	Date
Contact channel	Phone, counter/in person, visit, other	Code
Staff ID	Anonymized staff code	Text
Consultant category	Self, co-resident family member, non-co-resident family member, neighbor/other proxy, etc.	Code
Aza ID	Area identifier	Numeric or text
Administrative district ID	Area identifier	Numeric or text
Current treatment status	Combined septic, single septic, night-soil collection, unknown	Code
Consultation trigger (decisive reason)	Main reason that triggered the consultation, such as RCT flyer, BAU flyer, family encouragement, contractor, neighbor, article, etc.	Code
Information source heard from others	Whether the resident heard about the program from family, neighbors, contractor, or others	Code
Saw the flyer?	Saw it, did not see it, do not remember, not confirmed, no response	Code
Flyer source / route of exposure	RCT inserted flyer, BAU flyer, rediscovered at home, shown by a family member, other, unknown	Code
Read at least part of the flyer?	Whether the resident reports having read at least part of the flyer, rather than merely noticing it	Code
Most noticed part of the flyer	Subsidy, consultation, before-construction procedure, planning memo, other, unknown	Code
Saw the planning memo?	Whether the resident recalls seeing the planning-memo section in the enhanced flyer, if applicable	Code

Continued on the next page

Item	Description	Format (example)
Timing awareness after reading	Whether the resident reports having become more aware of when to consult/apply, if asked and recorded	Code
Main concern before consultation	Cost, construction burden, eligibility, unclear procedures, paperwork, timing, other	Code
Consultation content	Multiple selection allowed; e.g. eligibility, procedure, documents, contractor, schedule, subsidy amount	Checkbox columns (recommended) or text
Consultation level	Level 1, 2, 3 (staff judgment)	Code
Next step	Staff judgment or coded next action category	Code
Concern status after consultation	Resolved, somewhat remains, unchanged, unknown	Code
Research exclusion	0/1 flag indicating exclusion from research analysis upon request	Numeric
Contractor involvement before City consultation	Whether contractor involvement appears to have preceded the current City consultation, based on the resident's statement or administrative records	Code
Contractor contacted the City	Whether a contractor had contacted the City regarding the household or case	Code
Stage of contractor-related progress at consultation	No known contractor involvement, contractor consulted, estimate discussed or obtained, contractor selected, unknown	Code
Contractor encouraged City consultation?	Whether the resident reports that a contractor suggested or encouraged consultation with the City	Code
Remarks	Free-text notes if operationally necessary	Text (optional)

Operational principles for the consultation log

- "Consultation trigger (decisive reason)" and "Flyer source / route of exposure" should be distinguished whenever possible. The former refers to the main reason the person decided to consult; the latter refers to how the person encountered the leaflet or related information.
- If possible, the following exposure routes should be analytically distinguishable: RCT inserted flyer, ordinary BAU flyer, rediscovered flyer at home, family-mediated exposure, and other

routes.

- "Not confirmed," "Do not remember," and "No response" should be recorded as distinct categories whenever feasible rather than left blank.
- For "Consultation content," multiple selections are expected because more than one topic may be discussed in a single consultation, and a predefined set of multiple-response categories is recommended so that similar consultations are coded consistently across staff and over time.
- To avoid inconsistent wording, pull-down lists (data validation) are recommended for key items.
- For key coded items, blank cells should be avoided whenever possible; explicit codes should be used instead.
- Contractor-related variables in the consultation log are intended to capture consultation-time information that is observable to the City, including resident-reported or administratively known contractor involvement, rather than a complete external history of resident-contractor interactions.
- If exact dates of contractor contact are not administratively observable, categorical indicators based on consultation-time reports or administrative records are sufficient for the purposes of mechanism analysis.
- "Information source heard from others" should refer to channels through which the resident heard about the program or related information, even if those channels were not the decisive trigger for consultation.

Research exclusion should be coded as 1 when a resident indicates that they do not wish their information to be used for research. The administrative record itself should still be retained for regular administrative purposes.

D6A. Supplementary consultation-time record (E)

This supplementary record is optional and is requested only during pre-specified recording windows. It is intended to capture the approximate administrative burden associated with implementing the intervention and to provide descriptive evidence on practical feasibility. It is not intended for strict personnel management, productivity measurement, or detailed workflow analysis.

Basic structure

- One row per consultation-time record
- One variable per column
- If the management number is readily identifiable, it may be recorded; otherwise, consultation mode and consultation type may be recorded instead

Main items

- Record date
- Approximate consultation start time
- Approximate consultation end time
- Approximate consultation duration
- Staff-assessed complexity category (simple / standard / complex)
- Administrative management number, if readily identifiable
- Consultation mode, if household linkage is unavailable
- Consultation type, if household linkage is unavailable
- Remarks, if operationally useful

Approximate recording is acceptable. Second-level precision is not required. If exact start or end times are unclear, approximate duration alone may still be recorded. These data are supplementary to the consultation log and are used descriptively rather than as primary outcomes, key secondary outcomes, or mechanism variables.

D7. Data delivery format

The researcher would appreciate receiving the data in the following format.

1. **Household master**
   - One row per household
   - One variable per column
   - Primary key: administrative management number
2. **Behavioral history**
   - One row per household
   - One variable per event-date field
   - Linkable to the household master through the administrative management number
3. **Administrative subsidy execution ledger data**
   - One row per household or one row per subsidy-related case, depending on administrative practice
   - One variable per column
   - Linkable to the household master through the administrative management number or another equivalent identifier whenever feasible

4. **Consultation log**
    - One row per consultation
    - One variable per column
    - Linkable to the household master through the administrative management number whenever identifiable
5. **Supplementary consultation-time record**
    - One row per consultation-time record during the pre-specified recording windows only
    - This may be provided either as a separate worksheet or as a separate file

Recommended file format. It is recommended that the data be created within a single Excel workbook with separate sheets such as:

- "Household Master"
- "Behavioral History"
- "Subsidy Ledger"
- "Consultation Log"
- "Consultation-Time Record" (if used)

If separate files are operationally easier, that is also acceptable. If possible, a brief codebook or data dictionary explaining each column should also be attached.

D8. Anonymization procedures

- Within the City administration, research-use data should be created after removing personal information such as names and addresses.
- Households should be identified using the administrative management number or another anonymized household identifier that can be consistently linked within the City administration.
- The researcher will not receive names, addresses, or other directly identifying personal information.
- The consultation log, the behavioral history, and the subsidy-ledger data should be linkable to the household master through the administrative management number or an equivalent anonymized identifier.
- Staff should be recorded using anonymous staff IDs; staff names should not be provided to the researcher.

- If a resident requests that their information not be used for research, the ordinary administrative record may still be retained, while a research exclusion flag should allow the corresponding observation to be excluded from analysis.
- The researcher will not attempt re-identification.
- If a household is marked with the research exclusion flag, all analysis datasets delivered to the researcher should exclude that household's linked research records to the extent operationally feasible.
- If a supplementary consultation-time record is used, it may also be linked to the household master through the administrative management number when readily identifiable; otherwise, it may remain as a separate supplementary implementation record.

D9. Data entry rules (recommended)

For many consultation-log items (e.g. contact channel, consultation trigger, information source, concern, contractor contact status, next step), code entry through pull-down lists (data validation) is recommended to reduce inconsistent wording.

In particular, it is desirable to distinguish the following categories explicitly:

- Not confirmed: the item was not asked or could not be confirmed during the consultation
- Do not remember: the resident was asked but did not remember
- No response: the resident chose not to answer or did not answer

This distinction is analytically preferable to leaving cells blank. For key coded variables, blank cells should be avoided whenever possible. If the item was not asked, could not be confirmed, or was not answered, one of the corresponding explicit codes should be entered instead of leaving the field empty.

D10. Update frequency

During the RCT implementation and follow-up period, updated data are expected to be provided approximately monthly. Each monthly update should ideally reflect the status as of the 24th day of the month, because the City newsletter is distributed on the 25th and the intervention schedule is aligned with that distribution cycle.

If operationally feasible, regular monthly updates beginning shortly before or around the intervention period are desirable so that consultation, application, and subsequent implementation outcomes can be tracked in a timely and consistent manner.

As needed, the researcher will review the received data and may contact the City if clear omissions or inconsistencies are identified.

If operationally feasible, the extracted file should also indicate the extraction date or reporting cutoff date.

D11. Notes

This appendix is intended to be read together with the main PAP and the appendix describing consultation-log items and operational notes.

This document summarizes the requested data items and delivery format for the Combined Septic Tank Conversion RCT. Exact column names, coding rules, and workbook structure may be adjusted to fit administrative practice. When such adjustments are made, it is desirable to maintain consistency with the analytic principles of this specification and to consult with the researcher as needed.

Additional linkage variables related to the final frozen list and randomization may be added after the household list is finalized.

Version numbers for the septic-tank PAP are tracked independently from those for the sewer connection encouragement RCT.

E Consultation Log Items and Operational Notes

Consultation Log Items and Operational Notes
For the Combined Septic Tank Conversion RCT only[4]
Prepared for the PAP (ver.1.0)

This appendix specifies the consultation-log items to be recorded when residents make inquiries or consultations related to combined septic tank conversion in the Combined Septic Tank Conversion RCT in Date City. The main purpose is to structure consultation information recorded in the course of ordinary administrative work so that it can be used for policy improvement and research analysis. Whereas Appendix D specifies the requested variables, structure, and delivery format, this appendix provides operational guidance for recording consultation-level information in a manner consistent with the research design.

The consultation log is intended primarily to capture consultation-level process information, including consultation triggers, information routes, concerns, contractor-related involvement observable to the City, and other mechanism-related variables. Researchers will not receive personally identifiable information such as names or addresses.

This appendix should be read together with the main PAP and the data provision request specifications. It corresponds to the consultation-log component described in the PAP and provides operational guidance for recording consultation information in a way that is consistent with the research design while remaining feasible in ordinary administrative practice.

I. Consultation Log Items

1. Basic Information

- Consultation date
- Contact channel: telephone / counter visit / visit by city staff / other
- Staff ID (anonymous code)
- Consultant category: self (resident) / co-residing family member / non-co-residing family member / proxy such as neighbor / other / unknown

2. Household Identification and Area Information

- Management number (if available)
- Aza ID
- Administrative district ID (if available)
- Current wastewater treatment status: combined septic tank / single-treatment septic tank / night-soil collection / unknown

[4] This appendix is a research-oriented English version prepared for the PAP. The requested data items and administrative requests are based on the Japanese data request letter submitted to Date City. This document is prepared as a supporting appendix to the PAP for the Combined Septic Tank Conversion RCT.

3. Consultation Trigger, Information Source, and Flyer Exposure

- Trigger for consultation: RCT flyer / city newsletter article (other than the RCT flyer) / co-residing family member / non-co-residing family member / neighbor outside the household / contractor or other external party / other / no response / not confirmed
- Information source heard from others: what the resident heard from family members, neighbors, contractors, or other people (consultation contact information / costs or construction / personal experience / that they saw the city notice / other / no response / not confirmed)
- Whether the resident saw the flyer: saw it / did not see it / does not remember / no response / not confirmed
- If seen: how the flyer was obtained (newsletter insert / rediscovered at home / shown by a family member or acquaintance / shown by a contractor or other external party / does not remember / no response / not confirmed)
- If obtained through the newsletter insert: which issue (August / November / unknown / no response / not confirmed)
- Read at least part of the flyer?: yes / no / does not remember / no response / not confirmed
- Most noticed part of the flyer: subsidy / consultation / before-construction procedure / planning memo / other / unknown / no response / not confirmed

4. Main Concern Before Consultation

- Main concern before consultation: cost / burden of construction (time and effort) / procedures unclear / how to choose a contractor / housing conditions such as indoor plumbing work / timing / other / no response / not confirmed

5. Consultation Topics (multiple responses allowed)

For consultation topics, a predefined set of multiple-response categories is recommended so that similar consultations are coded consistently across staff and over time.

- Eligibility confirmation
- Subsidy program
- Pre-construction cautions
- Out-of-pocket cost
- Flow of construction
- Contractor selection / work schedule
- Breakdown / urgent response
- Post-completion procedures
- Other

6. Consultation Level (staff judgment)

- Consultation level: Level 1 (information provision) / Level 2 (specific consideration) / Level 3 (premised on implementation)

This should be recorded based on staff judgment rather than resident self-assessment.

7. Contractor-Related Status at the Time of Consultation

- Contractor involvement before City consultation: yes / no / unknown / not confirmed
- Contractor contacted the City: yes / no / unknown / not confirmed
- Stage of contractor-related progress at consultation: no known contractor involvement / contractor consulted / estimate discussed or obtained / contractor selected / unknown / not confirmed
- Contractor encouraged City consultation: yes / no / does not remember / no response / not confirmed

For contractor-related items, "not confirmed" should be used when the item was not asked or could not be confirmed during the consultation, whereas "unknown" should be used when the status itself remained unknown. These items are intended to capture contractor-related information observable to the City at the time of consultation, based on resident statements and/or administrative records where available. They are not intended to capture a complete external history of resident–contractor interactions.

8. Next Step (staff judgment)

- Next step: A (completed on the spot) / B (materials to be sent) / C (follow-up contact scheduled) / D (additional city response) / E (procedural guidance) / other / not confirmed

This should also be recorded based on staff judgment rather than resident self-assessment.

9. Optional Confirmation Items
These items are optional process indicators intended to supplement, rather than replace, the core consultation-log items.

- Clarity of the action pathway (optional): very easy to understand / somewhat easy to understand / neither / somewhat difficult to understand / very difficult to understand / no response / not confirmed
- Anxiety status after the consultation (optional): resolved / somewhat remains / unchanged / do not know / no response / not confirmed

10. Additional Items for Enhanced-Flyer Cases (conditional)

The following items should be recorded only when they are relevant and when it is operationally feasible to ask them in the course of ordinary work.

- Whether the resident looked at the consultation planning memo: yes / no / does not remember / no response / not confirmed
- Whether the resident had already decided the timing of consultation or application: yes / no / does not remember / no response / not confirmed
- Whether the flyer made the resident more aware of when to consult or apply: yes / no / does not remember / no response / not confirmed

11. Research Exclusion (opt-out)

- Research exclusion flag: 0 (eligible for research use) / 1 (exclude from research)

If a resident states that they do not wish their record to be used for research, ordinary administrative records should still be retained for regular administrative purposes, but the research exclusion flag should be set to 1. This flag has no effect on administrative handling and is used only to exclude the case from research analysis.

II. Operational Notes

- **Prioritize ordinary administrative work.** This document is intended for use only within the range that can be recorded naturally in the course of ordinary work. Staff should prioritize resident support rather than attempting to complete every field.
- **Prefer explicit codes to leaving a blank.** Use "not confirmed" when there was not enough time to confirm an item, and use "no response" when the resident did not wish to answer or did not answer. Blank cells should be avoided whenever possible.
- **Take care when speaking with older residents.** Avoid technical terms, use concise and clear expressions, and do not force all items into the conversation.
- **Consultation topics allow multiple selections.** When multiple topics apply, staff should record all relevant items.
- **Consultation level and next step are based on staff judgment.** These items should be recorded based on staff judgment rather than resident self-assessment.
- **Keep a record even if the management number is unknown.** If possible, also record the Aza ID and administrative district ID.
- **Distinguish trigger, information source, and flyer exposure.** The "trigger for consultation" refers to the main reason the resident decided to consult the City. Information heard from family, neighbors, contractors, or others may be recorded separately even if it was not the decisive trigger. Flyer exposure should also be recorded separately when possible.

- **Contractor-related variables should reflect what is observable at consultation.** If exact dates of contractor contact are not administratively observable, categorical indicators based on consultation-time reports or administrative records are sufficient for mechanism analysis.
- **Enhanced-flyer items are conditional.** Items related to the planning memo or timing awareness should be asked only when operationally feasible and should not interfere with ordinary administrative work.
- **If a resident does not wish their information to be used for research, add the research exclusion flag.** This must not affect procedures or the provision of administrative services.
- "Information source heard from others" should refer to channels through which the resident heard about the program or related information, even if those channels were not the decisive trigger for consultation.
- For key flyer-related items, predefined coded responses or pull-down lists are recommended to reduce inconsistent wording across staff.
- In cases where not all items can be recorded, priority should be given to the consultation date, household linkage information if available, trigger for consultation, flyer exposure, key consultation topics, and research exclusion status.

III. Suggested Explanations if Residents Ask About the Research

Q1. If asked, "Is this research?"
A. This is an effort to make the City's notices and consultation services easier to understand and improve them over time. Records may be used for policy improvement and research purposes only after they have been processed in a form that does not identify individuals.

Q2. If asked, "Do I have to answer?"
A. No. It is fine not to answer any item that the resident does not wish to answer. This does not affect procedures or access to administrative services.

Q3. If asked, "Please do not use this for research."
A. Understood. We will retain the record as necessary for regular administrative work, but we will not use it for research purposes.

IV. Related Q&A

Q1. Do staff have to ask every item?
A. No. Ordinary administrative work should come first, and staff should record items only within a reasonable range.

Q2. What if the management number is unknown?

A. Staff should still keep the consultation record. If possible, they should also record the Aza ID and administrative district ID.

Q3. What if the resident consults multiple times?

A. Record each consultation as one row per consultation.

Q4. What if multiple consultation topics apply?

A. Select all applicable topics.

Q5. What if the resident says their information should not be used for research?

A. Retain the record as necessary for regular administrative work and add the research exclusion flag.

V. Note

This appendix provides an overview of the consultation-log items and their operational use for the Combined Septic Tank Conversion RCT. Detailed column names, validation rules, and code lists are specified separately in the data provision request specifications.

F Research Timeline

Research Timeline
For the Combined Septic Tank Conversion RCT only[5]
Prepared for the PAP (ver. 1.0)

At the current stage, the Combined Septic Tank Conversion RCT follows the timeline below. The schedule reflects the current implementation plan agreed upon with Date City. Minor adjustments may be made depending on data availability and administrative coordination, without affecting the core research design or identification strategy.

2025

Month	Activities
December	• Receipt of the first dataset (latest version available in 2025) • Preliminary checking of household-level data structure and variable definitions • Development of the preliminary cluster design • Preparation of the preliminary pre-analysis plan (pre-PAP)

2026

Month	Activities
February	• First round of coordination with Date City regarding the draft leaflet materials for the Combined Septic Tank Conversion RCT and consultation-log items • Initial coordination with Date City regarding consultation-log items, data provision, and implementation procedures • Finalization of the leaflet content and layout

[5]This appendix is a research-oriented English version prepared for the PAP. This appendix is prepared for the Combined Septic Tank Conversion RCT only. Although some administrative recording procedures and data-management practices may in practice overlap with those used in other wastewater-policy activities, the present document specifies the research timeline for the Combined Septic Tank Conversion RCT and should be interpreted accordingly.

Month	Activities
March	• Confirmation of the data-provision policy and administrative procedures for monthly data updates • Preparation of the PAP, related appendices, and related administrative documents based on this coordination
April	• Start of baseline consultation-log recording for septic tank conversion inquiries and consultations • Administrative updating of household records to reflect moves and related changes • Continued refinement of the randomization procedure and consistency checks through trial runs
April–June	• Baseline observation windows for simplified consultation time-use recording, if implemented
Early May	• Receipt of the updated household data, including the FY2026 wastewater master data and April consultation-log records • Data consistency checks and verification of variables required for final sample construction and randomization
Mid–Late May	• Receipt of the frozen household roster for final treatment assignment • Final checks of the pre-specified sample-construction and randomization inputs using the frozen dataset • Final cluster-level treatment assignment (one-time assignment based on the frozen dataset)
June	• Administrative preparation for the first-wave leaflet distribution • Finalization of consultation-log operation and staff briefing on recording procedures • Preparation for monthly provision of administrative records and consultation logs • Preparation for collection of implementation records and, if feasible, administrative workload or implementation-cost records

<table>
<tr><th>Month</th><th>Activities</th></tr>
<tr><td>Early July</td><td>• Confirmation of the number of households to receive the first-wave leaflet distribution</td></tr>
<tr><td>Mid July</td><td>• Printing and insertion of the first-wave leaflet materials for the August municipal newsletter distribution</td></tr>
<tr><td>Late July</td><td>• Receipt of the updated administrative dataset closed as of July 24, 2026
• Review of data consistency and implementation readiness before the first-wave intervention</td></tr>
<tr><td>August</td><td>• Start of the first intervention phase (distribution of the August leaflet through the municipal newsletter)
• Start of post-distribution observation for short-run consultation behavior and early application-related responses
• Continued monthly submission of updated administrative records and consultation logs</td></tr>
<tr><td>September</td><td>• Continued collection of administrative records and consultation logs
• Continued review of implementation fidelity and short-run consultation activity</td></tr>
<tr><td>Early October</td><td>• Confirmation of the number of households to receive the second-wave leaflet distribution</td></tr>
<tr><td>Mid October</td><td>• Printing and insertion of the second-wave leaflet materials for the November municipal newsletter distribution</td></tr>
<tr><td>Late October</td><td>• Receipt of the updated administrative dataset closed as of October 24, 2026
• Review of data consistency and implementation readiness before the second-wave reminder intervention</td></tr>
</table>

Month	Activities
November	• Start of the second intervention phase (distribution of the November reminder leaflet through the municipal newsletter, using the same treatment assignment as in August) • Continued collection of administrative records and consultation logs • Continued review of short-run implementation and consultation activity after the reminder distribution
December	• Continued collection of administrative records and consultation logs • Preliminary review of implementation fidelity and short-run outcomes • Preliminary tabulation and interim summary of the Combined Septic Tank Conversion RCT

2027

Month	Activities
January–March	• Continued collection of administrative outcome data • Continued monthly provision of consultation logs and related administrative records • Data cleaning and construction of the main analysis dataset • Completion of the baseline requested follow-up period for the main analysis in March 2027
April–June	• Main empirical analysis for the pre-specified 12-month observation window • Construction of supplementary analysis files for the 3-month and 6-month windows

Month	Activities
July–December	• Additional data collection for medium-run outcomes, if extended data provision is available • Analysis of later subsidy-application, construction-start, payment, and completion outcomes • Robustness checks, manuscript preparation, and conference presentations

Notes

1. The final treatment assignment will be conducted only once, using the frozen household dataset received after the FY2026 household updates.

2. Any randomization checks or trial runs conducted before the receipt of the frozen household roster are intended only for data consistency verification and rehearsal of the randomization procedure; they do not constitute the formal assignment.

3. The intervention consists of two leaflet distributions through the municipal newsletter: the initial distribution in August 2026 and the reminder distribution in November 2026. The November distribution is based on the same treatment assignment as the August distribution and is not a stepped-wedge or phased-in rollout.

4. The consultation log is part of ordinary administrative workflow and is used to document consultation-level information in a form suitable for research analysis.

5. No follow-up household survey is planned as part of the main design of the Combined Septic Tank Conversion RCT. Consultation logs and administrative records are the main sources for outcome measurement and mechanism-related analysis.

6. The baseline requested plan is to receive administrative outcome data through March 2027; if feasible, data provision may be extended to cover later subsidy-application, construction-start, payment, and completion outcomes through March 2028.

7. Some operational procedures may in practice overlap with those used for other wastewater-policy activities. However, the timeline above is presented specifically for the Combined Septic Tank Conversion RCT.