United States Department of Agriculture

November 2016

IDAHO INTERAGENCY FACILITY PLAN MEMORANDUM

For Projects to be financed by SRF, USDA RD and/or CDBG

Attached is a document explaining recommended best practice for the development of Facility Plans to support funding applications for development of drinking water, wastewater, stormwater, and solid waste systems. This is the Idaho version of the federal Interagency Memorandum dated January 16, 2013. This document does not attempt to harmonize the federal and state requirements for environmental review.

The federal interagency memorandum explicitly allows state-administered funding programs to adopt the "Interagency Preliminary Engineering Report" outline in whole or in part. This state version, known as the Idaho Interagency Facility Plan (IIFP) outline, is intended for use by applicants seeking funding from one or more of the following programs:

- Idaho Drinking Water State Revolving Fund (DWSRF)
- Idaho Clean Water State Revolving Fund (CWSRF)
- Idaho Community Development Block Grants (ICDBG)
- USDA Rural Development Loans and Grants

The SRFs do not fund solid waste systems, but USDA and ICDBG do, and they will evaluate Preliminary Engineering Reports according to this memorandum. Solid waste systems must comply with the Solid Waste Management Rules (IDAPA 58.01.16), the Idaho Solid Waste Facilities Act (IC 39-74) and federal regulations, such as the Criteria for Municipal Solid Waste Landfills (40CFR258). Applicants are encouraged to coordinate with the local Heath District and DEQ Regional Office early in the planning process.

The intention of the IIFP is to reduce the duplication of effort required to apply for funding, and, to the extent practicable, harmonize the agencies' requirements for planning documents. It should be used in conjunction with applicable rules and agency guidance documents.

Applicants should note that use of the IIFP does not substitute for engineering judgment, nor does it replace applicable or relevant and appropriate state or federal regulations. In addition to approval by the funding agency, the IIFP must be approved by DEQ before project documents, such as a DEQ Preliminary Engineering Report, Wells Site Evaluation or plans and specifications, can be submitted for DEQ review. This memorandum does not supersede the review and approval process of any agency.

The Idaho Interagency Facility Plan was developed by contributions from the following individuals:

USDA, Rural Development, Rural Utilities Service	Noel LaRoque, P.E.
Idaho Department of Environmental Quality	Michael May
Idaho Department of Environmental Quality	Michael Stambulis, P;E.
Idaho Department of Environmental Quality	Todd Crutcher, P.E.
Idaho Department of Environmental Quality	Tim Wendland
Idaho Department of Commerce	Dennis Porter

ABBREVIATIONS

IIFP — Idaho Interagency Facility Plan, the Idaho-specific version of the federal "Interagency Preliminary Engineering Report"
NEPA — National Environmental Policy Act
NPV — Net Present Value
O&M — Operations and Maintenance
OMB — Office of Management and Budget
Report — Preliminary Engineering Report
SPPW — Single Payment Present Worth
USPW — Uniform Series Present Worth
PER — Preliminary Engineering Report

APPROVALS, EFFECTIVE DATE AND EXPIRATION

This agreement will take effect on the date of the last signature below. It will remain in effect until December 31, 2021, unless renewed or amended. The agreement may be cancelled, amended or renewed at any time by mutual agreement of the signing parties or their successors

For USDA Rural Development:

David A. Flesher, Director, Community Programs (Idaho) — date 11-29-16

For the Idaho Department of Commerce:

Megan Ronk, Director — date 12/1/16

For the Idaho Department of Environmental Quality:

John H. Tippetts, Director — date 12/8/2016

GENERAL OUTLINE OF AN IDAHO INTERAGENCY FACILITY PLAN FOR PROJECTS TO BE FINANCED BY SRF, USDA RD OR CDBG

1) PROJECT PLANNING
   a) Location
   b) Environmental Resources Present
   c) Population Trends
   d) Community Engagement

2) EXISTING FACILITIES
   a) Location Map
   b) History
   c) Condition of Existing Facilities
   d) Financial Status of any Existing Facilities
   e) Water/Energy/Waste Audits
   f) Equivalent Dwelling Units (EDU's) and Average Residential Flow Data

3) NEED FOR PROJECT
   a) Health, Sanitation, and Security
   b) Aging Infrastructure
   c) Reasonable Growth
   d) Compliance with State and Federal Regulations

4) ALTERNATIVES CONSIDERED
   a) Description
   b) Design Criteria
   c) Site Plan/Schematics
   d) Environmental Impacts
   e) Land Requirements
   f) Potential Construction Problems
   g) Sustainability Considerations
      i) Water and Energy Efficiency
      ii) Green Infrastructure
      iii) Other
   h) Cost Estimates

5) ALTERNATIVES ANALYSIS
   a) Life Cycle Cost Analysis
   b) Non-Monetary Factors

6) PROPOSED PROJECT (RECOMMENDED ALTERNATIVE)
   a) Preliminary Project Design
   b) Project Schedule
   c) Permit Requirements
   d) Sustainability Considerations
      i) Water and Energy Efficiency

ii) Green Infrastructure
iii) Green Project Reserve (DEQ)
iv) Other

e) Organizational and Staffing Requirements
f) Total Project Cost Estimate (Engineer's Opinion of Probable Cost)
g) Financing Options
h) Annual Operating Budget

i) Anticipated User Charges and Other Income
ii) Annual O&M Costs
iii) Debt Repayments
iv) Reserves

7) CONCLUSIONS AND RECOMMENDATIONS

DETAILED OUTLINE OF AN IDAHO INTERAGENCY FACILITY PLAN FOR PROJECTS TO BE FINANCED BY SRF, USDA RD OR CDBG

Applicants should note that use of this IIFP outline does not substitute for engineering judgment, nor does it replace applicable or relevant and appropriate state or federal regulations. The items below should be addressed to the level of detail appropriate for a planning study. In addition to approval by the funding agency, the IIFP must be approved by DEQ before other project documents, such as a DEQ Preliminary Engineering Report, Well Site Evaluation or plans and specifications, can be submitted for DEQ review. This memorandum does not supersede the review and approval process of any agency. Because this outline includes elements from each of the above-mentioned agencies, it should only be used by applicants seeking funding from agencies other than or in addition to SRF. Systems not seeking agency funding should follow the facility plan requirements in the Idaho Rules for Public Drinking Water Systems (IDAPA 58.01.08.502) and the Wastewater Rules (IDAPA 58.01.16.410). Applicants seeking only SRF funding should follow Form 5-A in the Clean Water State Revolving Fund Loan Handbook, available at www.deq.idaho.gov/water-quality/grants-loans/water-system-construction-loans.aspx and www.deq.idaho.gov/water-quality/grants-loans/wastewater-system-construction-loans.aspx, respectively.

1) PROJECT PLANNING
   Describe the area under consideration. Service may be provided by a combination of central, cluster, and/or centrally managed individual facilities. The description should include information on the following:

   a) Location. Provide scale maps and photographs of the project footprint, the project planning area, existing and proposed service areas and the area of potential effects. Include legal and natural boundaries and a topographical map of the service area.

   b) Environmental Resources Present. Provide maps, photographs, and/or a narrative description of environmental resources present in the project planning area that affect design of the project. Environmental review information that has already been developed to meet requirements of NEPA or a state equivalent review process can be used here. Use DEQ's EID Checklist (Form 5-F) or RUS Bulletin RD Instruction 1970 as a guide to the topics to be considered.

   c) Population Trends. Provide U.S. Census or other population data (including references) for the service area for at least the past two decades if available. Population projections for the project planning area and concentrated growth areas should be provided for the project design period (20 years for drinking water and wastewater treatment facilities and 40 years for drinking water distribution and wastewater collection facilities). Base projections on historical records with justification from recognized sources.

   d) Community Engagement. Describe the utility's approach used (or proposed for use) to engage the community in the project planning process. The project planning process should help the community develop an understanding of the need for the project, the utility operational service levels required, funding and revenue strategies to meet these requirements, along with other considerations. If the community has significant

numbers of poor, minority or limited English proficiency (LEP) residents, special efforts will likely be needed to reach these parties. We encourage applicants to consult with their funding agencies regarding appropriate outreach techniques.

2) EXISTING FACILITIES

Describe each part (*e.g.*, unit operation) of the existing facility and include the following information:

a) Location Map. Provide a map and a schematic process layout of all existing facilities. Identify facilities that are no longer in use or abandoned. Include photographs of existing facilities.

b) History. Indicate when major system components were constructed, renovated, expanded, or removed from service. Discuss any component failures and the cause for the failure. Provide a history of any applicable violations of regulatory requirements.

c) Condition of Existing Facilities. Describe present condition; suitability for continued use; adequacy of current facilities; and their conveyance, treatment, storage, and disposal capabilities. Describe the existing capacity of each component. Describe and reference compliance with applicable federal, state, and local laws and permits. Include a brief analysis of overall current energy consumption. Reference an asset management plan if applicable.

d) Financial Status of any Existing Facilities. (Note: Some agencies require the owner to submit the most recent audit or financial statement as part of the application package.) Provide information regarding current and projected rate schedules, current and projected annual O&M cost (with a breakout of current energy costs), other capital improvement programs, and tabulation of users by monthly usage categories for the most recent typical fiscal year. Give status of existing debts and required reserve accounts.

e) Water/Energy/Waste Audits. If applicable to the project, discuss any water, energy, and/or waste audits which have been conducted and the main outcomes.

f) Equivalent Dwelling Units (EDUs) and Average Residential Flow Data. Provide the current number of residential EDUs, identify the average residential flow and calculate commercial EDU's based on average residential flow.

3) NEED FOR PROJECT

Describe the needs in the following order of priority:

a) Public Health, Regulatory Compliance, Sanitation, and Security. Describe concerns and include relevant regulations and correspondence from/to federal and state regulatory agencies. Include copies of such correspondence as an attachment to the Report.

b) Aging Infrastructure. Describe the concerns and indicate those with the greatest impact. Describe water loss, inflow and infiltration, treatment or storage needs, management

adequacy, inefficient designs, and other problems. Describe any safety concerns.

c) Reasonable Growth. Describe the reasonable growth capacity that is necessary to meet needs during the planning period. Facilities proposed to be constructed to meet future growth needs should generally be supported by additional revenues. Consideration should be given to designing for phased capacity increases. Provide number of new customers that could be served by this project.

4) ALTERNATIVES CONSIDERED

This section should contain a description of the alternatives that were considered in planning a solution to meet the identified needs. Documentation of alternatives considered is often a report weakness. Alternative approaches to ownership and management, system design (including resource efficient or green alternatives), and sharing of services, including various forms of partnerships, should be considered. In addition, the following alternatives should be considered, if practicable: building new centralized facilities, optimizing the current facilities (no construction), developing centrally managed decentralized systems, including small cluster or individual systems, developing an optimum combination of centralized and decentralized systems, consolidation with a nearby system, and the No Action alternative. Alternatives should be consistent with those considered in the NEPA, or state equivalent, environmental review. Technically infeasible alternatives that were considered should be mentioned briefly along with an explanation of why they are infeasible, but do not require full analysis. For each technically feasible alternative, the description should include the following information:

a) Description. Describe the facilities associated with every technically feasible alternative. Describe source, conveyance, treatment, storage and distribution facilities for each alternative. A feasible system may include a combination of centralized and decentralized (on-site or cluster) facilities.

b) Design Criteria. State the design parameters used for evaluation purposes. These parameters should comply with federal, state, and agency design policies and regulatory requirements.

c) Map. Provide a site plan or schematic layout map to scale and a process diagram if applicable. If applicable, include future expansion of the facility.

d) Environmental Impacts. Provide a screening-level comparison of how the described alternatives may impact the environment. Describe only those unique direct and indirect impacts on floodplains, wetlands, other important land resources, endangered species, historical and archaeological properties, etc., as they relate to each specific alternative evaluated. Include generation and management of residuals and wastes. The comparison should be sufficient to aid in the selection of an alternative, but additional detail is not necessary.

e) Land Requirements. Identify sites and easements required. Further specify whether these properties are currently owned, to be acquired, leased, or have access agreements.

f) Potential Construction Problems. Discuss known or suspected concerns such as subsurface rock, high water table, limited access, existing resource or site impairment, unstable slopes, or other conditions which may affect alternative feasibility, cost of construction or operation of facility.

g) Sustainability Considerations. Sustainable utility management practices include environmental, social, and economic benefits that aid in creating a resilient utility.

   i) Water and Energy Efficiency. Discuss water reuse, water efficiency, water conservation, energy efficient design (*i.e.*, reduction in electrical demand), and/or renewable generation of energy, and/or minimization of carbon footprint, if applicable to the alternative. Alternatively, discuss the water and energy usage for this option as compared to other alternatives.

   ii) Green Infrastructure. Discuss aspects of project that preserve or mimic natural processes to manage stormwater, if applicable to the alternative. Address management of runoff volume and peak flows through infiltration, evapotranspiration, and/or harvest and use, if applicable.

   iii) Other. Discuss any other aspects of sustainability (such as resiliency, operational simplicity, public acceptanace or population trends) that are incorporated into the alternative, if applicable.

h) Cost Estimates. Provide cost estimates for each alternative, including a breakdown of the following costs associated with the project: construction, non-construction, and annual O&M costs. A construction contingency should be included as a non-construction cost. Cost estimates should be included with the descriptions of each technically feasible alternative. O&M costs should include a rough breakdown by O&M category (see example below) and not just a value for each alternative. Information from other sources, such as the recipient's accountant or other known technical service providers, can be incorporated to assist in the development of this section. The cost derived will be used in the life cycle cost analysis described in Section 5 a.

EXAMPLE O&M COST ESTIMATE

Item	Cost
Personnel (i.e. Salary, Benefits, Payroll Tax, Insurance, Training)	
Administrative Costs (e.g. office supplies, printing, etc.)	
Water Purchase or Waste Treatment Costs	
Insurance	
Energy Cost (Fuel and/or Electrical)	
Process Chemical	
Monitoring & Testing	

Short Lived Asset Maintenance/Replacement*	
Professional Services	
Residuals Disposal	
Miscellaneous	
Total	

* See Appendix A for example list

5) ALTERNATIVES ANALYSIS

Selection of an alternative is the process by which data from the previous section, "Alternatives Considered" is analyzed in a systematic manner to identify a recommended alternative. The analysis should be performed to a similar level of detail for all technically feasible alternatives, and should include consideration of both life cycle costs and non-monetary factors (*i.e.*, triple bottom line analysis: financial, social, and environmental). If water reuse or conservation, energy efficient design, and/or renewable generation of energy components are included in the proposal, then provide an explanation of their cost effectiveness in this section.

a) Life Cycle Cost Analysis. A life cycle present worth cost analysis (an engineering economics technique to evaluate present and future costs for comparison of alternatives) should be completed to compare the technically feasible alternatives. Do not leave out alternatives because of anticipated costs; let the life cycle cost analysis show whether an alternative may have an acceptable cost. This analysis should meet the following requirements and should be repeated for each technically feasible alternative. Several analyses may be required if the project has different aspects, such as one analysis for different types of collection systems and another for different types of treatment.

i) The analysis should convert all costs to present worth.

ii) The planning period to be used is 20 years for water or wastewater treatment facilities or 40 years for distribution or collection facilities, but may be reasonably adjusted by the engineer if prior concurrence is provided by the state and/or federal agencies involved.

iii) The discount rate to be used should be the discount rate established by the U.S. Environmental Protection Agency in accordance with 40CFR35.2030(b)(3), 18CFR704.39 and the Water Resources Development Act of 1974.

iv) The total capital cost (construction plus non-construction costs) should be included.

v) Annual O&M costs should be converted to present day dollars using a uniform series present worth (USPW) calculation.

vi) The salvage value of the constructed project should be estimated using the anticipated life expectancy of the constructed items using straight line depreciation calculated at the end of the planning period and converted to present day dollars.

vii) The present worth of the salvage value should be subtracted from the present worth costs.

viii) The net present value (NPV) is then calculated for each technically feasible alternative as the sum of the capital cost (C) plus the present worth of the uniform series of annual O&M (USPW (O&M)) costs minus the single payment present worth of the salvage value (SPPW(S)):

NPV = C + USPW (O&M) — SPPW (S)

ix) A table showing the capital cost, annual O&M cost, salvage value, present worth of each of these values, and the NPV should be developed for state or federal agency review. All factors (major and minor components), discount rates, and planning periods used should be shown within the table.

x) Short lived asset costs (See Appendix A for examples) must also be included in the life cycle cost analysis if determined appropriate by the consulting engineer or agency. Life cycles of short lived assets should be tailored to the facilities being constructed and be based on generally accepted design life. Different features in the system may have varied life cycles.

b) Non-Monetary Factors. Non-monetary factors, including social and environmental aspects (e.g. sustainability considerations, operator training requirements, permit issues, community objections, reduction of greenhouse gas emissions, wetland relocation) should also be considered in determining which alternative is recommended and may be factored into the calculations.

6) PROPOSED PROJECT (RECOMMENDED ALTERNATIVE)
The engineer should include a recommendation for which alternative(s) should be implemented. This section should contain a planning level description of the proposed project. Include a schematic for any treatment processes, a layout of the system, and a location map of the proposed facilities. At least the following information should be included as applicable to the specific project:

a) Preliminary Project Design. Summarize general size, capacity, type and location information, when available.

b) Project Implementation Schedule. Identify estimated timelines for submittal and anticipated approval of all required documents, land and easement acquisition, permit applications, advertisement for bids, loan closing, contract award, initiation of construction, substantial completion, final completion, and initiation of operation.

c) Permit Requirements. Identify any construction, discharge and capacity permits that will/may be required as a result of the project.

d) Sustainability Considerations (if applicable).

i) Water and Energy Efficiency. Describe aspects of the proposed project addressing water reuse, water efficiency, and water conservation, energy efficient design, and/or renewable generation of energy, if incorporated into the selected alternative.

ii) Green Infrastructure. Describe aspects of project that preserve or mimic natural processes to manage stormwater, if applicable to the selected alternative. Address management of runoff volume and peak flows through infiltration, evapotranspiration, and/or harvest and use, if applicable.

iii) Green Project Reserve (GPR). The DEQ state planning grant and SRF programs offer additional rating points to applicants competing for funding who propose to evaluate (for planning grants) or implement (for construction loans) certain "Green Project Reserve/Sustainable Infrastructure" features. The IIFP must include the analysis required as supporting information for any GPR items claimed during the DEQ priority list process if the planning effort was financed in whole or part by state grants. Similarly, if the applicant intends to seek construction financing from the SRF and claim GPR points, it is strongly recommended that the required supporting analysis be included in the IIFP.

iv) Other. Describe other aspects of sustainability (such as resiliency, operational simplicity, public acceptance or population trends) that are incorporated into the selected alternative, if incorporated into the selected alternative.

e) Operator requirements. Indicate whether the proposed project will require additional operators or operators with different license classes than they currently have. For drinking water projects, consult with the DEQ Regional Office. For wastewater projects, fill out classification worksheets from <www.deq.idaho.gov/water-quality/wastewater/pwws-classification-licensure/system-classifications.aspx> and submit to the DEQ State Office contact given on the web page to obtain preliminary classification(s).

f) Total Project Cost Estimate (Engineer's Opinion of Probable Cost). Provide an itemized estimate of the project cost based on the stated period of construction. Include construction, land and right-of-ways, legal, engineering, construction program management, funds administration, interest, equipment, construction contingency, refinancing, and other costs associated with the proposed project. The construction subtotal should be separated out from the non-construction costs. The non-construction subtotal should be included and added to the construction subtotal to establish the total project cost. An appropriate construction contingency should be added as part of the non-construction subtotal: For projects containing both drinking water and wastewater systems, provide a separate cost estimate for each system as well as a grand total. If applicable, the cost estimate should be itemized to reflect cost sharing including apportionment between funding sources. The engineer may rely on the owner for estimates of cost for items other than construction, equipment, and engineering.

g) Annual Operating Budget. Provide itemized annual operating budget information. The owner has primary responsibility for the annual operating budget, however, there are

other parties that may provide technical assistance. This information will be used to evaluate the financial capacity of the system. The engineer will incorporate information from the owner's accountant and other known technical service providers.

i) Income. Provide information about all sources of income for the system including a proposed rate schedule. Project income realistically for existing and proposed new users separately, based on existing user billings, water treatment contracts, and other sources of income. In the absence of historic data or other reliable information, for budget purposes, base water use on 100 gallons per capita per day. Water use per residential connection may then be calculated based on the most recent U.S. Census, American Community Survey, or other data for the state or county of the average household size. When large agricultural or commercial users are projected, the Report should identify those users and include facts to substantiate such projections and evaluate the impact of such users on the economic viability of the project.

ii) Annual O&M Costs. Provide an itemized list by expense category and project costs realistically. Provide projected costs for operating the system as improved. In the absence of other reliable data, base on actual costs of other existing facilities of similar size and complexity. Include facts in the Report to substantiate O&M cost estimates. Include personnel costs, administrative costs, water purchase or treatment costs, accounting and auditing fees, legal fees, interest, utilities, energy costs, insurance, annual repairs and maintenance, monitoring and testing, supplies, chemicals, residuals disposal, office supplies, printing, professional services, and miscellaneous as applicable. Any income from renewable energy generation which is sold back to the electric utility should also be included, if applicable. If applicable, note the operator grade needed.

iii) Debt Repayments. Describe existing and proposed financing with the estimated amount of annual debt repayments from all sources. All estimates of funding should be based on loans, not grants.

iv) Reserves. Describe the existing and proposed loan obligation reserve requirements for the following:

Debt Service Reserve — For specific debt service reserve requirements, consult with individual funding sources. If General Obligation bonds are proposed to be used as loan security, then this section may be replaced with a clear statement that General Obligation bonds will be used as loan security.

Short-Lived Asset Reserve — A table of short lived assets should be included for the system (See Appendix A for examples). The table should include the asset, the expected year of replacement, and the anticipated cost of each. Prepare a recommended annual reserve deposit to fund replacement of short-lived assets, such as pumps, paint, and small equipment. Short-lived assets include those items not covered under O&M, however, this does not include facilities such as a water tank or treatment facility replacement that are usually funded with long-term capital financing.

h) Potential Environmental Effects for the Selected Alternative. This information may be included within the IIFP, as a separate appendix, or as a separate document. This memorandum is not guidance in preparing the environmental report. Coordinate with your funding agencies before working on the environmental report.

7) CONCLUSIONS AND RECOMMENDATIONS
Provide any additional findings and recommendations that should be considered in development of the project. This may include recommendations for special studies, highlighting of the need for special coordination, a recommended plan of action to expedite project development, and any other necessary considerations.

APPENDIX A: EXAMPLE LIST OF SHORT-LIVED* ASSET INFRASTRUCTURE

Estimated Repair, Rebuilding and Replacement Expenses by Item

Drinking Water Utilities	Wastewater Utilities
Source Related: Pumps Pump Controls Pump Motors Telemetry Intake/Well Screens Water Level Sensors Pressure Transducers	Treatment Related: Pump Pump Controls Pump Motors Chemical feed pumps Membrane Filters Fibers Field & Process Instrumentation Equipment UV lamps Centrifuges Aeration blowers Aeration diffusers and nozzles Trickling filters, RBCs, etc. Belt presses and driers Sludge Collecting and Dewatering Equipment Level Sensors Pressure Transducers Pump Controls Backup power generator Chemical Leak Detection Equipment Flow meters SCADA Systems
Treatment Related: Chemical feed pumps Altitude Valves Valve Actuators Field & Process Instrumentation Equipment Granular filter media Air compressors & control units Pumps Pump Motors Pump Controls Water Level Sensors Pressure Transducers Sludge Collection & Dewatering UV Lamps Membranes Back-up power generators Chemical Leak Detection Equipment Flow meters SCADA Systems	Collection System Related: Pump Pump Controls Pump Motors Trash racks/bar screens Sewer line rodding equipment Air compressors Vaults, lids and access hatches Security devices and fencing Alarms & Telemetry Chemical Leak Detection Equipment
Distribution System Related: Residential and small commercial meters Meter boxes Hydrants and blowoffs Pressure reducing valves Cross connection control devices Altitude valves Alarms & Telemetry Vaults, lids, and access hatches Security devices and fencing Storage reservoir painting/patching	

* Short-lived assets are considered to be those components that will ordinarily need to be repaired, rebuilt or replaced within 15 years of installation