OREGON WATER RESOURCES DEPARTMENT
WATER SUPPLY DEVELOPMENT ACCOUNT
LOAN AND GRANT APPLICATION

I. Project Information

Project Name: *City of Dayton Water System Improvements*

Type of Project: *Transmission Line Replacement and Water Well Development*
☐ Check box if project type includes storage

Funding Request Type: ☐ Loan ☒ Grant

Funding Amount Requested: $ $1,940,627 Total cost of project: $ $2,587,503

Note: Grant funding requests must demonstrate cost match of at least 25% of total project cost. This may include in-kind.

II. Applicant Information

Principal Contact: *Scott Pingel*				**Fiscal Officer:** *Rochelle Roaden*			
Address:	*416 Ferry Street/PO Box 339*			Address:	*416 Ferry Street/PO Box 339*		
	Dayton, OR 97114				*Dayton, OR 97114*		
Phone:	*503-864-2221*	Fax:	*503-864-2956*	Phone:	*503-864-2221*	Fax:	*503-864-2956*
Email:	*spingel@ci.dayton.or.us*			Email:	*rroaden@ci.dayton.or.us*		

Involved Landowner 1: *City of Dayton*				**Involved Landowner 2:**			
Address:	*416 Ferry Street/PO Box 339*			Address:			
	Dayton, OR 97114						
Phone:	*503-864-2221*	Fax:	*503-864-2956*	Phone:		Fax:	
Email:	*spingel@ci.dayton.or.us*			Email:			

***Please include a supplementary document that lists all additional involved landowners if applicable.**

Certification:

I certify that this application is a true and accurate representation of the proposed project work and that I am authorized to sign as the Applicant or Co-Applicant. By the following signature, the Applicant certifies that they are aware of the requirements of an Oregon Water Resources Department funding award and are prepared to implement the project if awarded.

Applicant Signature: Scott Pingel Date: 1-19-16

Print Name: *Scott Pingel* Title/Organization: *City Manager, City of Dayton*

III. Project Summary

Please provide a description of the need, purpose and nature of the project. Include what the applicant intends to complete and how the applicant intends to proceed.

This project involves several improvements that will increase the City's access to water and make the production and delivery of water to customers more efficient, reliable and resilient. The first portion of the project includes the replacement of the portion of the City's Water Transmission Line (from the watershed to town) that is currently a tar-wrapped steel line installed in 1935. This old transmission line is the source of most of the City's water loss due to leaks from the aged pipeline. This line experiences about 20% leakage, which equates to about one million gallons per month. The second portion of the project includes the redevelopment of four existing wells (recently purchased by the City) to

meet current municipal drinking water standards, and connecting the wells to the City's water system. These wells will provide increased water supply for Dayton residents, and will ensure the Dayton Water System has sufficient fire flows into the future. These wells will be utilized in conjunction with the City's current wells on a rotational basis. Use of the additional wells will help preserve and lengthen the life of all of the City's wells. The third portion of the project includes upgrading the electrical and control systems on two of Dayton's existing wells to use variable frequency drives (VFD) on the well pumps, which will allow the City to better control drawdown and protect the aquifer, as well as increase the efficiency of producing water and delivering it to the City system. This project will address various deficiencies in the City system's ability to fully comply with Oregon Drinking Water Standards, as well as to more fully comply with Oregon Water Resources Department requirements under the City water rights.

IV. Project Specifics

Instructions: Answer all questions in this section by typing the answer below the question, using additional space as needed.

1. **Describe how the project will provide public benefits in each of the three public benefit categories.** Project applications will be scored and ranked based on the economic, environmental and social/cultural public benefits identified below. Describe the conditions prior to and after project implementation to demonstrate changes resulting from the project. Descriptions should be quantitative when possible. Information provided must be sufficient to allow evaluation of the public benefits of the project. **Please see the Public Benefit and Evaluation Guidance document for a description of how public benefits will be evaluated.** Applications that do not demonstrate public benefit in each of the three categories (economic, environmental, social/cultural) will be deemed incomplete. Leave blank any categories that are not applicable to project.

Economic Benefits ORS 541.673(2)

(a) Job creation or retention:
This project will lead to permanent jobs, in addition to temporary jobs during construction. The water transmission line portion of the project will provide increased water supply and the necessary fire flows to serve the currently undeveloped industrial and commercial zoned land within the Dayton UGB which is located north-easterly of the Yamhill River. In the Dayton Forward Plan (adopted by the City Council in 2012 and Attachment 1-Dayton Forward Plan of this application), this area is planned to be an energy and job center, which will provide permanent full-time jobs for the local area. When fully developed, this area could provide from 50 to 150 jobs, which is an exceptional number of jobs for the Dayton area. These are the only remaining undeveloped large commercial/industrial tracts within the Dayton UGB. Companies have approached Dayton regarding this industirial/commercial area, and one of the major challenges standing in the way of development proposals for this land is the lack of adequate municipal water supply (primarily lack of fire flows), a situation which cannot be corrected without upsizing the water transmission line as summarized herein. While the City has adequate water storage in the watershed reservoirs to provide fire flows for fire sprinklered commercial/industrial development in this area, the 1935 vintage transmission line is inadequate to deliver the required flows to this area and to town. The well improvements will improve system reliability & resiliency, making Dayton more attractive for new commercial/industrial development. It is also estimated that the proposed project will provide 33 temporary full-time construction jobs during construction of the various portions of the project.

(b) Increases in economic activity:
Water transmission line: As noted above, the completion of the water transmission line is expected to remove one of the major development obstacles hindering additional commercial/industrial development in this area of Dayton, which contains the only remaining large undeveloped commercial/industrial tracts within the Dayton UGB. As noted above, this project will remove one of the major infrastructure obstacles for the development of this land, which will lead to a significant number of permanent jobs for the local economy. In addition to these direct jobs from new commercial/industrial development in this area, other existing city businesses will benefit from development and job creation on these commercial/industrial tracts of land.

Well Improvements: While the new well project (ie. upgrade of recently purchased wells & water-rights west of town) is not expected to have an immediate or quantifiable impact on economic activity, the ability to provide high-quality, reliable and affordable municipal water into the future will provide capacity for future residential, commercial and industrial development. The reconfiguration of the other existing wells to VFD operation is expected to provide long-term cost savings to the City, which will assist in keeping water rates affordable for existing and new users, which will make Dayton a more viable candidate to attract new commercial & industrial development. The addition of auxiliary power to the new City wells will increase the reliability and resiliency of the City water system and minimize the risk of supply disruptions during emergencies or natural disasters, which is expected to increase the attractiveness of Dayton for future commercial/industrial development. Both of these

factors will result in increased economic activity by attracting new firms to town, as well as increasing sales and/or orders from many existing businesses, etc.

(c) Increases in efficiency or innovation:
Each portion of this project will make the production or delivery of water to Dayton water customers more efficient and cost effective. In particular, the replacement of the Watershed Transmission Line will reduce water loss (allowing the City's existing water supplies to be utilized more efficiently). The Watershed Transmission currently experiences about 20% loss, which equates to about one million gallons per month. Eliminating this lost water will result in exceptional increases in system efficiency, by reducing energy consumption required during the production & treatment of this water, which will result in substantial energy savings. The existing Watershed Transmission Line was constructed in 1935, and is well beyond its design life. It has been patched over and over again and still the City experiences significant loss from this line. This transmission line conveys water from the City's watershed sources (consisting of springs and 2 basalt wells), which WRD has designated as the City's primary water supply system. The addition of VFDs to the City's other supply wells is a continuation of an innovative discharge control and water level control strategy that the City developed and has vetted on three other wells to date (similar VFD well pump control was previously provided for Wellfield Wells 2, 4 and 5). This will increase water system efficiency and redundancy by providing a more reliable backup water source for the City system, and will save energy and staff time when compared to the existing single speed pumps which must be throttled back with discharge valves to achieve a similar effect. The addition of auxiliary power to the well improvements will greatly improve water supply redundancy and resiliency. The City's 2010 Water Master Plan documents that the addition of auxiliary power to well sources will delay the need for an additional water storage reservoir for approximately 20 years (ie. by providing wells that will operate during power outages, the resulting water standby/emergency source credit and associated reduction in required standby and emergency storage requirement will eliminate the projected water storage deficit in the main reservoir until the end of the 20 year planning period (ie. until about 2030)).

(d) Enhancement of infrastructure, farmland, public resource lands, industrial lands, commercial lands or lands having other key uses:
This water transmission line project enhances the City's water infrastructure by replacing a very old transmission line, reducing leakage & water losses, and improving fire flows available to vacant commercial and industrial lands. This will remove one of the major infrastructure obstacles to development of the currently undeveloped commercial/industrial land northeasterly of the Yamhill River (land within the Dayton UGB). By providing fire flows to this vacant commercial/industrial land, the value of this currently undeveloped land will be increased by an exceptional amount. The well projects enhance the City's water infrastructure by connecting new wells to the City's system and upgrading existing wells to more efficient well pump systems, and making the City's water supply more reliable, resilient and flexible. This upgrading of existing infrastructure, in conjunction with the anticipated cost & time savings, will enhance the ability of the City to dedicate more of the watershed system capacity to providing water for the commercial/industrial land noted above.

(e) Enhanced economic value associated with tourism or recreational or commercial fishing, with fisheries involving native fish of cultural significance to Indian tribes or with other economic values resulting from restoring or protecting water instream:
By replacing the 1935 Watershed Transmission Line and making water delivery more efficient, the City's watershed reservoirs will stay full longer and fill up more quickly, which will allow any excess-flow from the City's watershed springs to overflow into Miller Creek more often (ie. during periods when available water supply exceeds demand). Miller Creek flows into the Yamhill River, which flows into the Willamette River. Any additional flows to the Willamette River are beneficial to the recreational value of the Willamette River as well as to fish habitat. It will also allow the City to minimize withdrawal from the Dayton Prairie aquifer by allowing the City to maximize use of the watershed supply system. The optimization of the City's existing groundwater rights will greatly delay the need for development of the City's water-rights on the Willamette River. The net result will be to delay the timeframe for reduction in flows in the Willamette River due to withdrawal of water under the City's Willamette River surface water right.

(f) Increases in irrigated land for agriculture:

There is not expected to be any direct increase in irrigated land as a result of this project. Any increase in irrigated land would be indirect, based on the reduction in groundwater withdrawal corresponding with the elimination of the major water losses associated with the replacement of the existing 1935 water transmission line. Reductions in withdrawals under the City's more senior watershed area water rights will, in theory, result in more groundwater being available for use by more junior water rights in the surrounding agricultural areas. However, the amount of any such future increase cannot presently be quantified.

Environmental Benefits ORS 541.673(3)

(a) A measurable improvement in protected streamflows that accomplishes one or more of the following:
(A) Supports the natural hydrograph;
(B) Improves floodplain function;
(C) Supports state- or federally-listed sensitive, threatened or endangered fish species;
(D) Supports native fish species of cultural importance to Indian tribes; or
(E) Supports riparian habitat important for wildlife:

As noted above, by replacing the 1935 Watershed Transmission Line and making water delivery more efficient, the City's watershed reservoirs will stay full longer and fill up more quickly, which will allow any excess-flow from the City's watershed springs to overflow into Miller Creek more often (ie. during periods when available water supply exceeds demand). In addition to supporting riparian habitat along the creek, Miller Creek also flows into the Yamhill River, which flows into the Willamette River.

This project will also allow the City to minimize withdrawal from the Dayton Prairie aquifer by allowing the City to maximize use of the watershed supply system. The optimization of the City's existing groundwater rights will greatly delay the need for development of the City's water-rights on the Willamette River. The net result will be to delay the timeframe for reduction in flows in the Willamette River due to withdrawal of water under the City's Willamette River surface water right, which will have the effect of maintaining instream flows in the Willamette River for a longer period of time.

(b) A measurable improvement in groundwater levels that enhances environmental conditions in groundwater restricted areas or other areas:

The conversion of the existing well pumps to VFD control will allow the City to more accurately control drawdown in the wells, and more efficiently withdraw water in a manner that minimizes the potential for impacts to the existing Dayton Prairie aquifer. Well 1 & Well 3 are located adjacent to Airport Road, by the McMinnville airport, and the City is required to monitor aquifer levels to verify that operation of the City wells does not result in any significant impacts to senior water rights in the area. In addition, improvements in groundwater levels can be expected based on the reduction in groundwater withdrawal corresponding with the elimination of the major water losses associated with the replacement of the existing 1935 water transmission line.

(c) A measurable improvement in the quality of surface water or groundwater:

Again, by replacing the 1935 Watershed Transmission Line and making water delivery more efficient, the City's watershed reservoirs will stay full longer and fill up more quickly, which will allow excess-flow from the City's watershed springs to overflow into Miller Creek more often. As mentioned above, converting well pumps to VFD control will allow the City to better control the drawdown in the wells, which is vital to the health of the acquifer and the quality of water produced. In addition, experience has clearly demonstrated that the ability to accurately control drawdown in the wells reduces the growth of iron bacteria in the well bore and surrounding aquifer, which improves water quality available from this aquifer.

(d) Water conservation:

As noted above, Public Works currently estimates that water losses in the watershed system (due to the leaking 1935 transmission line) are about 20%. Replacing the 1935 Watershed Transmission Line will, again, reduce water loss and make the delivery of water to customers more efficient. This represents a very major opportunity to conserve limited groundwater resources by eliminating this lost water, and thereby reducing the amount which

the City must withdraw to meet current demands. As discussed in the City's Water Master Plan, reduction in water loss from the public water system is a major water conservation method which is within the City's direct control (subject only to funding constraints). Since the City is required (as a condition of their water rights) to utilize the watershed system to the maximum extent feasible, replacement of this transmission line will allow the City to minimize water withdrawal from the wellfield wells (ie. those City wells located by the McMinnville airport), which will conserve water in the wellfield aquifer. By replacing the remainder of the 1935 vintage steel watershed transmission line, the City expects to realize water conservation equivalent to reducing demands on the watershed by about 20%.

(e) Increased ecosystem resiliency to climate change impacts:
Again, replacing the 1935 Watershed Transmission Line will result in a reduction of water loss, which results in the City's watershed reservoir filling more quickly and staying full longer, which will result in spring water overflowing to Miller Creek, and eventually to the Yamhill and Willamette Rivers. Adding flows back to the river boosts ecosystem resiliency to climate change impacts. Furthermore, together, the proposed projects will diversify the City's water supply sources and provide a wider range of options for maintaining domestic water and fire flow delivery to City users. Such diversification between springs, basalt wells and widely separated alluvial wells, particularly if coupled with the addition of auxiliary power sources to the wells, will greatly improve the resiliency of the water supply under changing future climate conditions or natural disasters, which will result in the City's use of water having a smaller ecosystem impact, which helps ecosystem resiliency.

(f) Improvements that address one or more limiting ecological factors in the project watershed:
By replacing the 1935 Watershed Transmission Line and making water delivery more efficient, the City's watershed reservoirs will stay full longer and fill up more quickly, which will allow any excess-flow from the City's watershed springs to overflow into Miller Creek more often (ie. during periods when available water supply exceeds demand). It will also allow the City to minimize withdrawal from the Dayton Prairie aquifer by allowing the City to maximize use of the watershed supply system. The current TMDL's for the Yamhill River (developed by the State of Oregon, including DEQ) indicate that the river does not meet a number of water quality standards during critical periods of the year.

Social/Cultural Benefits ORS 541.673(4)

(a) The promotion of public health and safety and of local food systems:
The replacement of the 1935 Watershed Transmission Line will reduce the frequency of water leaks and required repairs on the old waterline, which in turn reduces the risks of contamination in the City's potable water supply system. Since potable water is utilized for all local food preparation facilities, safer potable water equates to lower risk of waterborne contamination of food supplies. In addition, experience has clearly demonstrated that the ability to accurately control drawdown in the City's wellfield wells reduces the growth of iron bacteria in the well bore and surrounding aquifer, which improves water quality available from this aquifer and reduces the chemical & treatment requirements at the City's water treatment plant.

(b) A measurable improvement in conditions for members of minority or low-income communities, economically distressed rural communities, tribal communities or other communities traditionally underrepresented in public processes:
Replacing the Watershed Transmission Line will provide necessary fire flows to the currently undeveloped commercial and industrial land in Dayton, which will enhance the ability to develop this land and add 50 to 150 jobs in Dayton. Dayton's current median household income per the 2010 Census is $45,000 per year. The median household income in the State of Oregon as a whole is $50,000. Adding jobs will create opportunities for Dayton's lower income families. Between the median household income and Dayton's currently higher than average water rate (current base water rate is $59.00/month), Dayton is considered an economically distressed community. The opportunity for grant funding of these projects will result in the City being able to keep the water rate more stable without the need for large or frequent rate increases, which also improves the attractiveness of the City for new commercial/industrial development.

(c) The promotion of recreation and scenic values:
While this project will not directly result in water based recreational activities, the ability to eliminate the major water losses in the watershed system will help water rates within reasonable limits, which in turn provides for the development of local commercial & industrial land. The Dayton Forward Plan (adopted by the City Council in 2012) includes numerous project recommendations to improve the scenic value of downtown Dayton, and provide for increased recreational opportunities. However, the Plan also emphasizes that investment in improving the City's infrastructure is critical in creating the economic environment which allows for these recreational & scenic improvements to be funded.

(d) Contribution to the body of scientific data publicly available in this state:
The project is expected to contribute only minor amounts of new data to the body of scientific knowledge publicly available in the state. For instance, the water level monitoring which the City is required to perform on the wellfield wells (ie. in the Dayton Prairie wellfield) is submitted to the Water Resource Department, and is publicly available. The water conservation (ie. reduction in watershed transmission line water losses) is expected to have only a minor effect on the water levels in the aquifer, but the submitted data will confirm whether this assumption is valid. Also, the reduction in required groundwater withdrawal rates in the City watershed area (due to reduction in water losses) will also be submitted to the Water Resource Department (and be publicly available) in the form of the annual water use reports. The new level transducers and discharge flow meters associated with the wellfield VFD well pump improvements will be connected in real time to the City's SCADA system, which also stores this data and is able to illustrate trends and changes over time.

(e) The promotion of state or local priorities, including but not limited to the restoration and protection of native fish species of cultural significance to Indian tribes:
These projects will support local priorities as documented in the 2010 Dayton Water System Master Plan and the 2013 Dayton Water Management & Conservation Plan, which both identify the watershed transmission line project as high priority. In addition, the water loss reduction (ie. conservation) associated with the replacement of the watershed transmission line is in conformance with recommendations in the Oregon Integrated Water Resources Strategy regarding identification of conservation options by Oregon municipalities (pg 32, 50, 56, 86, 88/89), as well as the recommendations in Dayton's 2013 Water Management & Conservation Plan (pg 18), which was approved by the WRD (special order volume 89 page 1080). In addition, the more energy efficient VFD well pumps are also in conformance with the energy conservation recommendations in the Oregon Integrated Water Resources Strategy (pg 50).

(f) The promotion of collaborative basin planning efforts, including but not limited to efforts under Oregon's Integrated Water Resources Strategy:
The City has participated over the past several years on regional water supply planning efforts with the cities of McMinnville, Lafayette and Carlton, related to the development of a surface water source and treatment of water from the Willamette River. With the recent acquisition of the new wells proposed for improvement and connection to the City system under this application (ie. Fisher Farms wells), the City Council determined that the full development and utilization of their existing groundwater sources needed to take priority in the near term over the development of a new surface water supply & treatment system from the Willamette River. The City also participates on the Dayton Prairie Groundwater Management Advisory Board, and this project is part of the City's ongoing efforts to minimize impacts to the Dayton Prairie aquifer so as to avoid impacts to other water rights holders, to the extent feasible.

2. Identify Project Location.

(a) Attach map of project implementation area if appropriate. List map(s) in this space and attach to application.
See attached exhibit maps.

(b) Township	Range	Section	Quarter-Quarter Section
4	*3 and 4*	*4, 9, 16, 19, 25 and*	

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(c) Tax Lot Number(s)
Watershed Transmission Line replacement
- *4309-1600, 4309-400*
- *Remainder within City, County or ODOT right-of-ways (McDougall Rd, Hwy 99W, Hwy 18, Kreder Rd, Ferry Street).*

Fisher Farm Wells (upgrade & connect to City system)
- *4319-1501 (west site)*
- *4319-1202 & 4319-1100 (east site)*

Well 1 & 3 (VFD upgrade)
- *4436-1100 (Well 1)*
- *4425-400 (Well 3)*

(d) Latitude/Longitude
Watershed Transmission Line replacement
- *From 45°15'06"N/123°03'42"W (reservoir) to 45°13'19.5"N/123°04'23.5"W (1st & Ferry)*

Fisher Farm Wells (upgrade & connect to City system)
- *45°12'31.6"N/123°05'50.9"W (east property)*
- *45°12'24.5"N/123°06'04"W (west property)*

Well 1 & 3 (VFD upgrade)
- *45°10'58.6"N/123°07'22.4"W (Well 1)*
- *45°11'19.1"N/123°07'49.5"W (Well 3)*

/

(e) County
Yamhill County

(f) Watershed
Lower Yamhill Watershed (Hawn Creek/Yamhill River sub-watershed)

(g) River/Stream Mile (where applicable)
Watershed Transmission Line river crossing/Yamhill River Mile 5

3. ***(a)*** **Will the project result in a physical change on private land?** ☒ **Yes** ☐ **No**

If yes, attach evidence that landowners are aware of and agree to the proposal. List attachments below.
Watershed Transmission Line replacement
- *Easements between City reservoir and McDougall Road (see Attachment 2-Transmission Line Easement 1 and Attachment 3-Transmission Line Easement 2).*

Fisher Farm Wells (upgrade & connect to City system)
- *City owned private property (see Attachment 4-Fisher Farms Property Reports)*

Well 1 & 3 (VFD upgrade)
- *City owned well site easement parcels (see Attachment 5-Wellfield Wells 1 and 2 Easements and Attachment 6-Wellfield Wells 2,3,4 & 5 Easements)*

(b) **Will the project result in monitoring on private land?** ☐ **Yes** ☒ **No**

If yes, attach evidence that landowners agree to the proposal and are aware that monitoring information is public record. List attachments below.

4. Provide a project schedule, including beginning and completion dates. Use the following table as a guide. Attach a separate sheet to application if needed.

Estimated Project Duration: May 1, 2016 to December 1, 2017

Place an "X" in the appropriate column to indicate when each Key Task of the project will take place.

Project Key Tasks	2016				2017				20 & Beyond
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	
Transmission Line Topographic Survey /Design /Permit Applications /Agency Approvals		X							
Transmission Line Bidding		X							
Transmission Line Contract Administration/Inspection			X	X	X	X			
Transmission Line Construction			X	X	X	X			
Fisher Farms Well Survey/Design/Permit Applications/Agency Approvals		X	X						
Fisher Farms Well Bidding			X						
Fisher Farms Contract Administration/Inspection				X	X	X			
Fisher Farms Well Construction				X	X	X			
Well 1&3 VFD Design/Permit Applications/Agency Approvals			X	X					
Well 1&3 VFD Bidding				X					
Well 1 & 3 VFD Contract Administration/Inspection					X	X			
Well 1 & 3 Construction					X	X			

5. Describe any conditions that may affect the completion of the project.

Funding availability.

6. Attach a completed feasibility analysis if one has been completed.

See Dayton 2010 Water Master Plan (WMP). Applicable WMP excerpts are attached as indicated below.

1. Watershed Transmission Line replacement:

- *WMP 6.4.5 – Watershed Springs, Conveyance Reliability (Attachment 7-WMP)*
- *WMP 6.4.6 – Water Source Reliability – Scenario #2, System Loss Reduction (Attachment 7-WMP)*
- *WMP 7.6.1 – Water Loss Reduction is equivalent to new sources (Attachment 8-WMP)*

- *WMP 8.4.1.1.2 – WS Transmission Main description (Attachment 9-WMP)*

2. Fisher Farm Wells (upgrade & connect to City system):

- *WMP 6.4.2.3. Purchase existing wells & water-rights, upgrade to municipal standards & connect to City water system. (Attachment 7-WMP)*

3. Well 1 & 3 (VFD upgrade):

- *WMP 4.3.3.1.2: WMP 6.4.4. Maximize Well production, protect well structures & aquifer. (Attachments 7-WMP and 10-WMP)*

7. Provide suggestions for interim and long-term project performance benchmarks.

Project Performance Benchmarks would include the following:

- *Completion of final engineering, Bidding the Transmission Line project, Awarding the Transmission Line Project, Completion of Transmission Line Project,*
- *Completion of final engineering, Bidding the Well Development Project (Fisher Farms Wells), Awarding of Well Development Projects, Completion of Well Development Project,*
- *Completion of final engineering, Bidding of VFD Project, Awarding the VFD Project, Completion of VFD Project,*
- *Final Completion of Water System Improvements.*

8. Provide letters of support for the proposed project (list in this space and attach to application).

Dayton Prairie Groundwater Management Advisory Board (Attachment 28-Dayton Prairie Letter of Support)

Dayton Community Development Association (Attachement 29-DCDA Letter of Support)

9. Describe partnerships and collaborative efforts associated with the project.

The City of Dayton is a member of the Dayton Prairie Groundwater Management Advisory Board, and this project is part of the City's ongoing efforts to minimize impacts to the Dayton Prairie aquifer so as to avoid impacts to other water rights holders, to the extent feasible. The City has participated over the past several years on regional water supply planning efforts with the cities of McMinnville, Lafayette and Carlton, related to the development of a surface water source and treatment of water from the Willamette River. With the recent acquisition of the new wells proposed for improvement and connection to the City system under this application (ie. Fisher Farms wells), the City Council determined that the full development and utilization of their existing groundwater sources needed to take priority in the near term over the development of a new surface water supply & treatment system from the Willamette River.

10. Consultations/communications with affected Indian tribes and with the Legislative Commission on Indian Services regarding the project.

Has the Legislative Commission on Indian Services been contacted to identify tribes affected by the project?

☒ **Yes** ☐ **No**

Please provide correspondence as an attachment to this application.

Email from 12/17/2015 (Attachments 11-WSD Application and Affected Tribes and 12-WSD Application and Affected Tribes)

Has there been consultation/communications with affected Indian tribes?

☒ **Yes** ☐ **No**

Please provide a description of consultation/communication that occurred and attach documents to this application if applicable.

I emailed the potentially affected tribes. The Grand Ronde and Warm Springs Tribes asked for project details. Each was sent USGS topographic maps with project details included. (Attachments 13-Potentially Affected Tribes and 14-Potentially Affected Tribes)

11. Provide a description of:

***(a)* Required local, state and/or federal permits and/or authorizations for project implementation that have been secured to date. Please attach secured permits/authorizations to the application.**

Watershed Transmission Line replacement

- *Land Use Compatibility Statement (LUCS) form by Yamhill County (obtained as part of previously completed watershed springs project & associated watershed waterline replacement project). (Attachment 15-OHA DWS LUCS)*
- *Waterline review exemption from Oregon Health Authority, Drinking Water Services. (Attachment 16-OHA DWS Waterline Review Exemption)*

Fisher Farm Wells (upgrade & connect to City system)

- *WRD approval of water-rights transfer after City purchase of Fisher Farms property. (Attachment 17-Water Rights Transfer)*
- *On August 18, 2015 the City submitted an Application for Permanent Water Right Transfer for Water Right Certificates 82997, 68768, and 89940, which would change the character of use, the place of use and provide additional points of appropriation for each Water Right. (Attachment 18-East Parcel Transfer Application)*

Well 1 & 3 (VFD upgrade)

- *None to date.*

***(b)* Required local, state and/or federal permits and/or authorizations that will be secured in the future to implement the project. Describe efforts to date in securing these permits and/or authorizations.**

Watershed Transmission Line replacement

- *Yamhill County utility installation permit (portion of waterline along McDougall Road and along portion of Kreder Road outside of City Limits)*
- *ODOT Utility installation permit (portion of waterline under Hwy 99W and along Hwy 18). (Attachment 19-ODOT Permit Application Form)*

Fisher Farm Wells (upgrade & connect to City system)

- *LUCS forms by Yamhill County (for submittal to Oregon Health Authority, Drinking Water Services in conjunction with plan review). (Attachment 20-OHA DWS LUCS FF Wells)*
- *Review & approval of final design by Oregon Health Authority, Drinking Water Services required.*
- *Finalize water rights transfer to municipal use, for use by City of Dayton within their service area.*

Well 1 & 3 (VFD upgrade)

- *LUCS forms by Yamhill County (for submittal to Oregon Health Authority, Drinking Water Services in conjunction with plan review).*
- *Review & approval of final design by Oregon Health Authority, Drinking Water Services required.*

12. Provide any additional supplemental materials to demonstrate ability to implement the project. Examples include project plans and specifications, engineering details and water availability analysis. List documents in this space and attach to application.

Watershed Transmission Line replacement

- *Plans completed for the portion of waterline between City reservoirs and previously replaced segment uphill of McDougall Wells (Attachment 21-Watershed Transmission Line)*
- *Topographic survey of a portion of Kreder Road and Yamhill River crossing has been completed (remainder of survey will be obtained once funding is available)*
- *This is a high priority project recommended by the Dayton 2010 Water Master Plan (see references summarized in section 6 above, as well as WMP Table 12-2, Recommended Capital Improvement Priorities – Dayton, projects T2 & T4) (Attachment 22-WMP 12-2)*

Fisher Farm Wells (upgrade & connect to City system)

- *None to date. However, this installation will be similar in concept to the existing Well 2 & Well 5 project (Attachment 23-Well 2 and 5). Water quality & chemistry is similar, although projected production rates from the new wells are slightly higher.*
- *This is a high priority project recommended by the Dayton 2010 Water Master Plan (see references summarized in section 6 above, as well as WMP Table 12-2, Recommended Capital Improvement Priorities – Dayton, project S5) (Attachment 22-WMP 12-2)*

Well 1 & 3 (VFD upgrade)

- *Preliminary mechanical piping plans for VFD upgrades (does not yet include electrical/controls design). These installations will be similar in concept to the previous Well 4 VFD upgrade project. Well 2 & 5 included well pump VFDs as part of their initial construction (which served as the model for the Well 4 VFD upgrade project). (Attachments 24-Well 1 VFD Improvements, 25-Well 3 VFD Improvements, and 26-Well 4 VFD Improvements)*
- *This is a high priority project recommended by the Dayton 2010 Water Master Plan (see references summarized in section 6 above, as well as WMP Table 12-2, Recommended Capital Improvement Priorities – Dayton, projects S16 & S17) (Attachment 22-WMP 12-2)*

V. Storage Project Requirements (if not a storage project continue to Section VI)

For any storage project please contact Water Resources Grant Administrator, Jon Unger, at (503) 986-0869 prior to completing the application.

13. Storage Project Type: ☐ **Above Ground** ☐ **Below Ground**

14. If above-ground storage, would the proposed storage project be located in-channel?

☐ **Yes** ☐ **No** ☐ **N/A**

15. Identify the capacity in acre-feet of the proposed storage project.

16. Has a water right application been filed for the proposed storage project?

☐ Application not yet made.

☐ Water right application made; permit not yet issued Application #

☐ Permit issued. Application # Permit #

For Questions 17 & 18 answer the following:

(a) Does the proposed storage project impound surface water on a perennial stream?

☐ **Yes** ☐ **No** ☐ **Uncertain**

(b) Does the proposed storage project divert water from a stream that supports state- or federally-listed sensitive, threatened or endangered fish species?

☐ **Yes** ☐ **No** ☐ **Uncertain**

(c) Does the proposed storage project divert more than 500 acre-feet of water annually?

☐ **Yes** ☐ **No**

17. Water Dedicated Instream ☐ N/A

For above ground storage projects seeking grant funding: If you answered "yes" to any of the questions posed in a-c above a minimum volume of water equal to at least 25% of the stored water must be dedicated to instream use.

Identify percentage of stored water to be dedicated to instream use.

%

Note: Any storage project dedicating 25% of stored water to instream use will automatically receive a median score in the environmental public benefit category with the opportunity to demonstrate additional environmental benefit to increase the score.

18. Seasonally Varying Flow Prescription

For all storage projects: If you answered "yes" to any of the questions posed in a-c above the project will need a **Seasonally Varying Flow (SVF) Prescription**, determining the duration, timing, frequency and volume of flows (including ecological baseflow), necessary for protection and maintenance of biological, ecological, and physical functions outside of the official irrigation season. The initial step in defining the SVF for the project is to schedule an SVF meeting with OWRD. For assistance and more information please contact Water Resources Grant Administrator Jon Unger at (503) 986-0869.

Identify whether the storage project will need a Seasonally Varying Flow Prescription.

☐ Yes ☐ No ☐ Uncertain

VI. Environmental Public Benefit for Conservation Projects Dedicating Water Instream (if not a conservation project continue to Section VII)

19. Identify percentage of conserved water to be dedicated to instream use. ☒ N/A

%

Note: Any project that conserves water and dedicates at least 25% of the conserved water quantity to instream use will automatically receive a median score in the environmental public benefit category with the opportunity to demonstrate additional environmental benefit to increase the score. Water dedicated to instream use must be permanently placed instream and protected by the Oregon Water Resources Department.

VII. Financial Information

For Loan Applicants – Since loan applications do not require cost match, loan applicants who do not offer a cost match need not complete Section A and can disregard the match funding columns in Sections B and C. Budget and costs of key tasks must be identified in sections B & C. Loan applicants will be required to provide additional financial information related to their ability to repay the loan. This request for information will take place after the scoring and ranking process for those projects that are recommended for funding.

For Grant Applicants – Complete Sections A, B and C.

Section A – Cost Match Information

Applicants must demonstrate a minimum 25% funding match based on the total project cost. The match may include: a) applicant funds or secured funding commitment from other sources; b) pending funding commitment from other sources; and/or c) the value of in-kind labor, equipment rental, and materials essential to the project. For secured funding, the applicant must attach a funding award letter from the match funding source that specifically mentions the dollar amount shown in the "Amount/Dollar Value" column. For pending resources, documentation showing a request for the matching funds must accompany the application. Funds expended prior to grant agreement are not reimbursable nor do they qualify for cost match without prior authorization by the Department.

In the Type column below matching funds may include:	**In the Status column below matching funds may have the following status:**
• **Cash** - Cash is direct expenditures made in support of the feasibility study by the applicant or partner*.	• **Secured** - Funding commitments already secured from other sources.
• **In-Kind** - The value of in-kind labor, equipment rental and materials essential to the feasibility study provided by the applicant or partner.	• **Pending** - Pending commitments of funding from other sources. In such instances, Department funding will not be released prior to securing a commitment of the funds from other sources. Pending commitments of the funding must be secured within 12 months from the date of the award.

* "Partner" means a non-governmental or governmental person or entity that has committed funding, expertise, materials, labor, or other assistance to a proposed project planning study. OAR 690-600-0010.

Match Funding Source (if in-kind, briefly describe the nature of the contribution)	**Type** (✓ One)	**Status** (✓ One)	**Amount/ Dollar Value**	**Date Match Funds Available** *(Month/Year)*
Infrastructure Finance Authority - Safe Drinking Water Revolving Loan Fund (Attachment 30-Business Oregon, IFA Funding)	☒ cash ☐ in-kind	☐ secured ☒ pending	*$636,875*	*June 16*
Dayton Public Works - (1) isolation of existing water system & sources as required to allow connection of new components into City system, (2) manual operation of system components during short periods as required to maintain service during shutdowns mentioned above, (3) periodic inspections by Public Works staff during construction.	☐ cash ☒ in-kind	☒ secured ☐ pending	*$10,003*	*May 16*
	☐ cash ☐ in-kind	☐ secured ☐ pending		
	☐ cash ☐ in-kind	☐ secured ☐ pending		
	☐ cash ☐ in-kind	☐ secured ☐ pending		
	☐ cash ☐ in-kind	☐ secured ☐ pending		
	☐ cash ☐ in-kind	☐ secured ☐ pending		
	☐ cash ☐ in-kind	☐ secured ☐ pending		
	☐ cash ☐ in-kind	☐ secured ☐ pending		

	☐ cash ☐ in-kind	☐ secured ☐ pending		

Section B – Project Budget

Please provide a line item budget for the project; see example below. If significant additional detail is needed please complete separately and attach to completed application.

Line Items	Number of Units* *(e.g. # of Hours)*	Unit Cost *(e.g. hourly rate)*	In-Kind Match	Cash Match Funds	OWRD Funds	Total Cost
Materials	*See Attachment 31-Section VII B Budget Detail*					
Contractual/Services						
Staff Salary/Benefits						
Equipment (must be approved)						
Supplies						
Other:						
Total for Section B						
Percentage for Section B						***100%***

* *Note: "Unit" should be per "hour" or "day" not per "project" or "contract."* *Number of Units x Unit Costs = Total Cost*

Section C – Key Task Cost

Complete Section C below. Key Tasks identified in Section C should be the same as the Key Tasks in Section IV(4) above.

Project Key Tasks	In-Kind Match	Cash Match Funds	OWRD Funds	Total Cost
Transmission Line Topographic Survey/Design/Permit Applications/Agency Approvals		*$39,500*		*$39,500*
Transmission Line Bidding		*$6,000*		*$6,000*
Transmission Line Contract Administration/Inspection	*$5,000*	*$47,000*		*$52,000*
Transmission Line Construction		*$200,000*	*$1,092,000*	*$1,292,000*
Fisher Farms Survey/Design/Permit Applications/Agency Approvals		*$52,000*		*$52,000*
Fisher Farms Bidding		*$7,500*		*$7,500*
Fisher Farms Contract Administration/Inspection	*$5,003*	*$85,000*		*$90,000*
Fisher Farms Construction		*$125,000*	*$730,000*	*$855,000*
Well 1 & 3 VFD Design/Permit Applications/Agency Approvals		*$24,000*		*$24,000*
Well 1 & 3 VFD Bidding		*$7,500*		*$7,500*
Well 1 & 3 VFD Contract Administration/Inspection		*$34,000*		*$34,000*
Well 1 & 3 VFD Construction		*$9,373*	*$118,627*	*$128,000*
Total for Section C	*$10,003*	*$636,873*	*$1,940,627*	*$2,587,503*