Government of South Australia
Department for Environment and Water

SOUTH AUSTRALIA - ADDITIONAL EFFICIENCY MEASURES CRITERIA ASSESSMENT OUTCOME

Project Reference No:	414923
Outcome:	Compliant with the Efficiency Measures assessment
Date recommended to proceed to public comment	6 October 2020
Date recommended to proceed to the Australian Government's detailed assessment stage	19 March 2021

Overview

This project is seeking to undertake upgrades to the on-farm irrigation and fertigation system and upgrade and enhance the existing precision agriculture technologies on a 195.0 hectare (ha) wine grape and watermelon growing property located at Overland Corner in the SA Riverland.

The primary water saving component of the project will be the replacement of 38.0ha of existing surface drip irrigation in wine grape blocks which is currently operating outside of design specifications due primarily to clay accumulation in emitters which is causing the diaphragms to remain open. Additional secondary/in-field filtration and internal flow metering will also be installed as part of the project to assist with the optimal and efficient operation of the irrigation system.

The farm currently uses a satellite navigation system to assist with its watermelon production which averages 45.0ha per season and which is irrigated with sub-surface drip tape. This navigation system will be upgraded as part of the project and new land-forming software will be integrated into the system which will ensure that land forming optimises irrigation and drainage and general soil health within the melon production areas.

The works are expected to generate significant improvements in on-farm productivity through both increased yields (t/ha) and quality. Uniformity within the melon production is especially critical for ensuring a consistent quality (ripeness) of product is supplied into the market which is directly related to in-field irrigation management. The works will also ensure that existing farm employment, both on-going and seasonal is secured into the future through the adoption of sustainable land and water management practices. All project works will be undertaken, or supplied by local contractors meaning program investment will remain in the local community and deliver a direct economic stimulus for the region.

The property where works are proposed is located adjacent the River Murray and floodplain reserve areas that contain a variety of environments that provide important habitat for many aquatic birds and mammals. Fishing, boating and enjoying the river are popular recreational activities in the areas and therefore the applicant is strongly committed to ensuring any irrigation induced impacts on the environment are negligible. All project works will occur within the existing irrigated footprint of the property and therefore no removal or disturbance to native vegetation and/or indigenous heritage area will occur.

A conservative water saving of 29.6ML, or 0.15ML/ha is expected to be generated per annum through the undertaking of the nominated works.

Part 1 - State Assessment - Efficiency Measures criteria

Assessment Approach

This State Assessment is reliant on the information provided by the applicant. The comments provide a summary of the information provided by the applicant which is deemed relevant by the assessor to demonstrate that the Efficiency Measures – Agreed Criteria have been met.

Water Savings Substantiation

The water savings expected to be achieved by the project have been verified by an Independent Approved Irrigation Professional.

Currently the property has sections of exiting surface drip irrigation that are old and under-performing with an accumulation of clay in the emitters over the years causing diaphragms to remain open resulting in significant leaks. Consistent with benchmarks for this type of irrigation modernisation activity and crop water use levels a water saving of 1.0ML/ha is expected to be generated through the replacement of the failing drip tube.

Some of the irrigated areas are also currently without back-up field filtration and it is proposed to install automatic flushing field filters to assist with the general management and operation of the irrigation system. In addition to this water meters will be installed on a number of the irrigation valves to enable real time monitoring of flow rates which will identify valves that are not operating as programmed and/or within design specifications. Flow meters are already installed on a number of the existing valves and have proven to be a very useful management tool, particularly the ability to remotely access the data. An upgrade of the properties fertigation system will be undertaken as part of the project which will assist with maximising the productivity of on-farm water use.

In the watermelon production side of the business an upgrade to the farms precision agriculture platforms are proposed. With soil management being such a critical component of shallow rooted watermelon production the integrated adoption of precision agriculture technologies will enable further efficiencies in irrigation management to be achieved.

The watermelon production is undertaken using sub surface drip irrigation and therefore it is most important that planting is precise so that the seedlings are transplanted directly above the drip line to optimise irrigation efficiency. A further software package will be added to the system which will enable the properties watermelon patches to be precisely laser levelled and formed to ensure efficient irrigation and drainage management.

An upgrade to the cooling system in the storage facility for the watermelons is also included in the project works. Storage is an essential component of watermelon production as it provides flexibility with harvest times, the ability to manage the timing of when fruit is sold into market and also to ensure that supplied fruit meets the temperature (°C) specifications of the market.

Having access to an effective on-site storage facility enables the melons to be picked slightly before they are ready and then to slowly ripen in storage. Harvesting the melons earlier reduces water use at a time when daily crop water requirements are at their maximum levels. The cold storage facilities also increases flexibility with the timing of supplying produce into the market enabling more optimal price points to be taken and to avoid selling during periods of over-supply and depressed pricing.

To assist with reducing the cost of operating the storage facility a 39.6kW solar system will be installed which will ensure that cooling during the heat of the day is as cost effective as possible and enable the other benefits described above to be fully realised.

While it is challenging to assign a fixed water saving (ML/ha) to the integrated upgrades that are proposed for the watermelon production it is expected that with upgrades to the precision agriculture platforms together with enhanced cold storage facilities that a conservative water saving of 5% is feasible and achievable. Current water use levels on the watermelons averages 4.5ML/ha.

The project is expected to return a conservative 29.6 ML to the environment, with the applicant retaining 18.5 ML of water savings.

Water Saving Component	Area ha	Water Saving (ML/ha)	Estimated Water Saving (ML)	Total volume of Eligible Water Rights offered for transfer (ML)
Surface Drip Replacement – Wine Grapes	38.0	1.0	38	29.6
Precision Agriculture Technologies & Cold Storage Improvements – Watermelons	45.0	5%^	10.1	
Total Water Saving			**48.1**	

^ 45.0ha x 4.5ML/ha x 5% = 10.1ML

Efficiency Measures Criteria	Project Responses to Efficiency Measures Criteria	Adequate Response Y/N	State Assessment
Evidence of engagement with community, industry and government agencies during project design (Criteria 9, 6a, 6b)	6a. N/A - Private Diverter. 6b. The Delivery Partner was engaged by the Australian Government in December 2018. Since this time the Delivery Partner has undertaken extensive consultation on the Water Efficiency Program with key stakeholders. Direct engagement with industry and commodity groups, irrigation infrastructure operators, Local Government, Regional Development organisations has occurred on the program. The works proposed through this project are consistent with regional plans and strategies on sustainable land and water management practices and building resilience and adaptability into the irrigated agriculture sector. 9a. Please refer to response to 6b. 9b. Please refer to response to 5b.	Y	The application has demonstrated that the delivery partner has consulted with relevant industry bodies, Irrigation Infrastructure Operators, local governments and regional development organisations on a strategic regional approach to developing projects under the Water Efficiency Program. The proposed project is not located within an irrigation network, so the application is not required to provide evidence that the relevant network operator or water corporation is involved in or aware of the project.
Potential Direct Water Market Impacts (Criteria 7a, 7b, 7c, 7d)	7a. The information provided with the application confirms that the nominated water is legally owned by the proponent. The project has also been independently assessed which confirms that the volume	Y	The application has demonstrated that: • The water rights to be transferred as part of the project have been independently verified as a conservative estimate of the water savings that can be generated and that the project will not

	nominated for return represents a conservative share of the total assessed water saving. 7b. The information provided with the application confirms that the water entitlement nominated for transfer has been held by the proponent for >3 years. 7c. As described in 7a. this project will generate water savings in addition to the volume that has been nominated for transfer. Much of the properties annual water requirements are for the production of permanent crops so the retained savings will reduce demand while increasing supply. This will mean that post project there is a net positive increase in water availability which will ensure there is no direct impact on water reliability as a result of this project or others given the same outcomes are being achieved with respect to water demand and supply. 7d. As the program requires the transfer of conservative volumes of water savings the projects are delivering additional water supply into the consumptive pool. Recent reports released by the ACCC indicate the primary driver of water price remains supply and demand and this project is contributing to a reduction in demand and an increase in supply and therefore is very likely to have a net positive impact on water pricing.		transfer more water than the project will save. • The water entitlements to be transferred have been held for a minimum of 3 years at the time of application. • The project will generate water savings above the volume returned to the environment and will effectively increase the water available for productive uses in the consumptive pool. The increase in available water will have no direct impact on reliability, and will put downward pressure on water market prices.
Contribution to Proponent Businesses	4a. The property where the works will occur	Y	The application has demonstrated that:

and Irrigation District Viability (Criteria 4a, 4b, 4c)	is a private diversion and therefore is not reliant on shared irrigation infrastructure for accessing water. Upgrades will occur to the internal irrigation system that supports both permanent and annual irrigated crops. 4b. As outlined in 4a. the property is a private diversion and the works are focused on ensuring the long term sustainability and productivity of the irrigation system. 4c. This proposal is not located within an irrigation district however the proposed works are consistent with regional, State and Basin scale land and water management planning objectives.		• The project will contribute to the future viability and sustainability of the business by improving the productivity and efficiency of on-farm water use. • The project is focused on modernising existing inefficient irrigation systems which will underpin irrigation management into the future and will not upgrade water supply infrastructure where the system, or parts of the system, are not going to be used in the future. The project is not located within an irrigation network, so the application is not required to take account of relevant irrigation business' strategies or plans.
Support for Regional Economies (Criteria 5a, 5b, 5c, 5d, 6c)	5a. As outlined in 2a. all project related goods and services will be sourced from local service providers so investment will remain in the regional community and provide direct economic stimulus. The works will also ensure the business is more viable and able to continue the contribution it makes to the local community through employment and expenditure. 5b. The property involved in this proposal is a private irrigation diversion and therefore is not reliant on shared irrigation infrastructure. The works will address existing limitations with irrigation management which will increase the productivity of on-farm water use.	Y	The application has demonstrated that the project will: • Generate benefits for the broader region and not just the applicant through sourcing of local farm input supplies by the participating business and generating regional employment. • The project will contribute to the longer term sustainability of the business and the irrigation district more generally. • Increase regional and Basin wide productivity through increasing the volume of water available for consumptive uses on the water market.

	5c. The works proposed under this project are anticipated to increase the output (t/ha) of the property and therefore will result in an increase in the productivity capacity of the region. 5d. The project works will not have a negative impact on regional jobs and with the improved productivity there is potential to increase seasonal employment requirements in the annual irrigated cropping component of the business. 6c. While the works will provide a direct benefit to the participant through increased turnover these benefits will extend beyond the farm gate. Increased production will deliver greater output to local wineries which assists with securing employment in this section of the supply chain. The project works will also generate a significant level of retained water savings for the participant which will reduce the volumes that need to be sourced from the allocation market. This will create additional water within the consumptive pool via reduced demand and the increased supply facilitated by the efficiency improvements.		
Social and Environmental Benefits (Criteria 2a, 2b, 2c,)	2a. The works proposed through this project will assist the business to significantly improve the productivity of its on-farm water use.	Y	The application has: • demonstrated that the project will: ○ Support the regional irrigated agriculture industry which is an

	The works will directly facilitate an increase in annual revenue that is derived from the existing irrigated crops which will assist with under-pinning the current levels of on-going and seasonal employment. All goods and services will be sourced from within the local region meaning the program investment will deliver a direct economic stimulus. Irrigated agriculture is the primary driver of the Riverland economy and therefore the project will ensure that this important economic contribution continues well into the future. The project will also see the adoption of precision agriculture tools and platforms and therefore will showcase the latest innovation in irrigation management. The Riverland region is also very reliant on tourism and the associated recreation activities that the River Murray provides. This project will ensure that irrigation induced impacts on the River Murray and surrounding floodplains and wetlands are minimised and that the ecological and recreational values are maintained and enhanced. 2b. While the project involves only on-farm works the property is located in a visible location just off one of the main public access roads to one of the region's Locks/Weirs. The works will showcase best practice irrigation management. 2c. N/A		important sector of the Riverland and SA State economy. ○ Improve the profitability and resilience of the business and ensure that the economic contribution can be sustained over time. ○ Generate benefits for the broader region and not just the applicant through sourcing of local farm input supplies by the participating business and generating regional employment. ○ Increase regional and Basin wide productivity through increasing the volume of water available for consumptive uses on the water market. • Not identified any social values including the amenity to local communities of weirs, storages and parks that may be affected by the project. The project is below the $4 million threshold for large projects and is not required to address criteria 2c.

Work health and safety laws (Criteria 2d)	2d. The Delivery Partner has well established WHS management procedures in place which have been specifically tailored to the implementation of Australian Government irrigation efficiency programs. The proponent will be required to complete a Risk Assessment specific to the project activities and demonstrate that all required insurance is in place and current, prior to the project works commencing and any funds being paid.	Y	The application has demonstrated that the applicant and delivery partner have an understanding of all relevant legislation or regulation that will require approval prior to works commencing and that they will comply with all relevant laws including work health and safety laws.
Business Resilience, including Drought and Climate Change Impacts (Criteria 10a, 13a, 12)	10a. Please refer to response to 5b. 12a. As was outlined in the response to criterion 7a. the project will generate water savings in addition to the volume that is nominated for transfer. The water savings have been based on accepted industry benchmarks and published irrigation requirements and verified as part of the independent technical assessment of the proposal. The project budget has been prepared using quotations provided by reputable service providers. Project costs have been reviewed as part of the independent technical assessment. 13a. As outlined in responses to other criteria this project will generate water savings in addition to the volume that has been nominated for transfer. The retained savings will provide the proponent with enhanced resilience and adaptability during periods of	Y	The application has demonstrated that the project will: • Address under-performing irrigation areas which will allow water to be used as efficiently as possible while maximising output (yield). • Generate additional water savings that will be retained by the applicant to improve the capacity of the proponent to better manage periods of reduced water availability. • Provide the enterprise with an increased ability to endure and adapt to future climate variability and water availability by generating productivity improvements and improving profitability.

	reduced water availability which are predicted to occur more frequently in the future. As the property has a mix of permanent and annual production there is flexibility in the area that is planted to annual crops. The works proposed through this project will ensure the efficiency and productivity of the annual cropping side of the business is maximised and therefore better adapted to manage climate variability into the future.		
Cultural Benefits **(Criteria 8a, 8b, 8c)**	8a. Irrigated agriculture underpins the Riverland region and therefore investments that ensure this contribution can continue deliver a direct benefit to local communities and the region and State more broadly. The Riverland region is also very reliant on tourism and the associated recreation activities that the River Murray provides. This project will ensure that irrigation induced impacts on the River Murray and surrounding floodplains and wetlands are minimised and that the ecological and recreational values are maintained and enhanced. 8b. As has been outlined in other criteria the project represents a direct investment in an irrigated business to ensure its longer-term sustainability and viability. This outcome contributes benefits at the community, region and State level by underpinning existing employment both on-farm and within the processing and distribution networks.	Y	The application has described the expected cultural benefits of the proposed project, including the strategy for increasing the cultural benefit to participants and their communities through local sourcing of goods, services and labour. The total project value is below $3 million and is not required to identify cultural heritage sites and manage any impacts in accordance with relevant Commonwealth and State laws.

	All goods and services for the project will be sourced from local suppliers and contractors ensuring program investment remains in the local community and region. The project will also adopt innovative irrigation management technologies which can be showcased to encourage broader adoption and highlight the region's longer-term commitment to sustainable land and water management practices. 8c. N/A		

In-Principle Recommendation

The application has adequately addressed the Efficiency Measures – Agreed Criteria and demonstrated that the project will have neutral or positive socio-economic impacts and not have negative third party impacts on irrigation systems, water markets or regional communities. Accordingly, the South Australian Government provides in-principle approval for the project and recommends that the application proceed to the **public comment stage**.

Part 2 - State Response – Public Comments

Relevant Public Comments to be responded to	Response to Relevant Public Comments
Any project that decreases the total pool available to food production results in negative outcomes as there will simply be less water available for agriculture. On-farm projects reduce the total amount of water available to agriculture. While this proponent claims they will become more efficient with their water use, agriculture as a whole in the Basin will be worse off as there is simply less for agriculture to use.	The South Australian Government prefers efficiency measures to recover water for the environment, as they provide real and positive outcomes to irrigation businesses, while supporting communities that would otherwise be hard hit by the reduction in regional productivity or the closure of businesses through water leaving the consumptive pool through buybacks. Unlike water buybacks that remove water from the consumptive pool, efficiency measures increase the volume of water available. Properly constructed efficiency measures projects recover water that is effectively "lost" through evaporation, leaky infrastructure and inefficient irrigation systems or overwatering and is unavailable for use until projects are completed. The water savings for all South Australian on-farm projects have been independently verified as a conservative estimated of water savings. Those water savings were not previously available to the consumptive pool. Additionally, proponents of all on farm projects in South Australia under the efficiency measures program have retained a portion (ranging from 12 percent to 89 percent) of the water savings with this increasing supply and putting downward pressure on water market prices. Accordingly, South Australian projects are increasing the water available for consumptive uses across the southern connected Murray-Darling Basin and have not reduced the amount of water available for agricultural use.

On-farm efficiency measures are creating upward pressure on water prices as reported in independent research completed by ABARES and Aither and do not meet principle 7d – Projects must not directly increase the price of water. Independent research over a number of years, most recently from the University of Adelaide, has demonstrated that irrigators who participate in on-farm projects are highly likely to purchase additional water following the implementation of the project and the resulting increase in enterprise profitability.	Both the ABARE and Aither reports have acknowledged that it is difficult to separate the impact of water recovery from other major trends such as climate change and the significant growth in industries and as such the findings should be treated with caution. The ABARE report draws heavily on a recent study undertaken by ABARES, available at https://onlinelibrary.wiley.com/doi/full/10.1111/1467-8462.12396?af=R This study found that some on-farm program participants subsequently purchased water to increase their irrigated production. The study did not however directly link this to participation in the program and noted that many other demographic and economic factors are likely to influence business decisions. In fact, it is specifically stated that the study did not attempt to define or separately quantify direct and indirect effects of on-farm efficiency measures projects on water prices. The ABARES study also evaluated many projects that would not meet the criteria agreed by the MDB Ministerial Council and as a result, no conclusions can be drawn between the findings of this study and on-farm efficiency measures projects that have been submitted since these criteria were agreed. The Aither report appears to treat water recovered through on-farm efficiency measures the same as buybacks. This fails to recognise that on-farm efficiency measures are reducing demand by the same amount and in most cases more than the corresponding reduction in supply. Accordingly, it would be incorrect to infer that South Australian on-farm projects are directly attributable to increased water use and higher water market prices when they are consistently reducing water demand and increasing supply. Any expansion of irrigated area and hence water use that occurs post on-farm project is an indirect effect of the program and is likely to be driven by many other complex and interrelated economic and social factors. These indirect impacts are not considered as part of the socio economic assessment.

The application does not provide details of how it will impact the irrigation network, nor does it provide details of the local and regional plans for the area and how the project aligns with relevant objectives.	These criteria have been addressed in various places in the application and the proponent has demonstrated that their proposed project will: • Increase productivity in terms of return per ML for the business and region. • Improve the business's long term resilience and viability which will have flow on benefits to the local, regional and State economies. • Source goods and services for the project from local companies which will add further economic stimulus to the Riverland community. • Increased regional and Basin wide productivity through increasing the volume of water available for consumptive uses on the water market. The applicant is a private diverter and is not located within an irrigation network, so the application is not required to take account of relevant irrigation business' strategies or plans.

Final Recommendation

The application has adequately addressed the Efficiency Measures – Agreed Criteria and demonstrated that the project will have neutral or positive socio-economic impacts and not have negative third party impacts on irrigation systems, water markets or regional communities. Accordingly, it is recommended that the application proceed to the Australian Government's detailed assessment stage.

Water Savings Substantiation – Water Efficiency Program (WEP) Technical Assessment

Project ID: [redacted]

Crop Type: Wine Grapes [redacted]

Project Summary:

The applicant is seeking to undertake integrated improvements to the irrigation and precision agriculture management systems on a 195.0ha wine grape and [redacted] growing property located at [redacted] in the SA Riverland region.

The primary water savings will be achieved through the replacement of 38.0ha of drip tube which will be supported with upgrades to secondary filtration, real time flow monitoring at irrigation valves and an upgrade of the properties fertigation system.

For the [redacted] production which generally averages 45.0ha per season an upgrade to the farm satellite navigation system is proposed which will enable the adoption of precision planting and land management techniques. An additional software program will be added to the GPS which will assist with land forming for the [redacted] production which is vital to assist with managing drainage, optimising irrigation efficiency and providing benefits to soil management and rotation more generally.

A conservative water saving of 29.6ML or 0.15ML/ha is expected to be generated from the project works.

Water Saving Methodology:

Currently the property has sections of exiting surface drip irrigation that are old and under-performing with an accumulation of clay in the emitters over the years causing diaphragms to remain open resulting in significant leaks. Consistent with benchmarks for this type of irrigation modernisation activity and crop water use levels a water saving of up to 1.0ML/ha is expected to be generated through the replacement of the failing drip tube.

Some of the irrigated areas are also currently without back-up field filtration and it is proposed to install automatic flushing field filters to assist with the general management and operation of the irrigation system. In addition to this water meters will be installed on a number of the irrigation valves to enable real time monitoring of flow rates which will identify valves that are not operating as programmed and/or within design specifications. Flow meters are already installed on a number of the existing valves and have proven to be a very useful management tool, particularly the ability to remotely access the data. An upgrade of the properties fertigation system will be undertaken as part of the project which will assist with maximising the productivity of on-farm water use.

In the [redacted] production side of the business an upgrade to the farms precision agriculture platforms are proposed. With soil management being such a critical component of shallow rooted [redacted] production the integrated adoption of precision agriculture technologies will enable further efficiencies in irrigation management to be achieved.

The [redacted] production is undertaken using sub surface drip irrigation and therefore it is most important that planting is precise so that the seedlings are transplanted directly above the drip line to optimise irrigation efficiency. A further software package will be added to the system which will

enable the properties [redacted] patches to be precisely laser levelled and formed to ensure efficient irrigation and drainage management.

An upgrade to the cooling system in the storage facility for the [redacted] is also included in the project works. Storage is an essential component of [redacted] production as it provides flexibility with harvest times, the ability to manage the timing of when fruit is sold into market and also to ensure that supplied fruit meets the temperature (°C) specifications of the market.

Having access to an effective on-site storage facility enables the [redacted] to be picked slightly before they are ready and then to slowly ripen in storage. Harvesting the [redacted] earlier reduces water use at a time when daily crop water requirements are at their maximum levels. The cold storage facilities also increases flexibility with the timing of supplying produce into the market enabling more optimal price points to be taken and to avoid selling during periods of over-supply and depressed pricing.

To assist with reducing the cost of operating the storage facility a 39.6kW solar system will be installed which will ensure that cooling during the heat of the day is as cost effective as possible and enable the other benefits described above to be fully realised.

While it is challenging to assign a fixed water saving (ML/ha) to the integrated upgrades that are proposed for the [redacted] production it is expected that with upgrades to the precision agriculture platforms together with enhanced cold storage facilities that a conservative water saving of 5% is feasible and achievable. Current water use levels on the [redacted] averages 4.5ML/ha.

Water Saving Activity	**Area (ha)**	**Total Water Saving (ML/ha)**	**Total Water Saving (ML)**	**Conservative Water Saving (ML)**	**Conservative Water Saving (ML/ha)**
Surface Drip Replacement – *Wine Grapes*	38.0	1.0	38.0		
Precision Agriculture Technologies & Cold Storage Improvements – [redacted]	45.0	5%^	10.1		
		TOTAL	**48.1**	**29.6**	**0.15**

^ 45.0ha x 4.5ML/ha x 5% = 10.1ML

Project Budget:

Project costs have been based on quotes provided [redacted]

Irrigation Design:

A design for the new fertigation system has been provided here. Drip tube is like for like replacement.

Approvals/Environmental:

No approvals are required to conduct the works as the works are occurring on private property and the activities will not have an adverse environmental impact on the property or surrounds.

The specific irrigation efficiency improvements will contribute to reducing deep drainage beyond the crop root zone and hence improved salinity outcomes for the River Murray.

[redacted]

[redacted]

1 PROJECT DETAILS:

CID Name:	[redacted]	**Date:**	17/08/2020
CID No:	[redacted]	**Client Name:**	[redacted]
Project Name:	[redacted]	**Project No:**	[redacted]
Submitted By:	[redacted]	**Contractors:**	[redacted]

2 PREAMBLE AND PROJECT SCOPE:

The above project was assessed on the below mentioned scope and is limited to project data supplied, including any documentation and designs as being true and correct in every respect.

I declare, as an Independent Approved Irrigation Professional agreed to under the Deed, that:

a) I have carried out the technical and practical feasibility assessment for the Works; and
b) I have had no previous involvement in preparing this Project Proposal.

I certify that the Project Works are technically and practically feasible, including that:

a) the projected water savings they will generate are reasonable and realistic, including being appropriate to the crops, soils, climates, water delivery system and topography of the Eligible Irrigator's Property;
b) the rationale for the water savings assessment is clearly explained;
c) the projected water savings can be achieved while maintaining the agricultural production potential of the Property on which the Works would be completed as part of a Project;
d) the engineering solutions they entail are achievable and appropriate to the needs of the Eligible Irrigator and the Property;
e) the projected costs are reasonable and realistic, and within the expected range for that type of infrastructure and scale of installation; and
f) the projected water savings they will generate represent the conservative or minimum feasible volume that could be derived from completing the Works.

[redacted]

Certified Irrigation Designer

[redacted]