



Smart Meter Installation Project

For McCurtain County Rural Water District 2

WaterSMART Grant: Small-Scale Water Efficiency Project

Fiscal Year 2020 | BOR-DO-20-F006 | March 2nd, 2020

Applicant:

McCurtain County Rural Water District 2
310 North Choctaw Street
Millerton, OK 74750

Project Manager:

Samuel Guest, Vice-Chairman of Board
310 North Choctaw Street
Millerton, OK 74750
580-236-3055
samuel.guest32@gmail.com

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(1) Technical Proposal and Evaluation Criteria

Executive Summary

McCurtain County Rural Water District 2, water supplier for the City of Millerton, OK and surrounding areas, consistently faces significant water losses within its distribution network. To address this issue, the district is seeking funding under this proposal to purchase and install 350 smart water meters and associated hardware and software to replace existing conventional meters. While the district has regularly made efforts to repair and maintain its infrastructure, installation of these meters will serve to significantly reduce water losses currently experienced within the district's water distribution system while also enhancing the management of the community's water supply. The proposed project is supported by existing local and regional water resources planning efforts, supported by the Choctaw Nation. The application information required in the Funding Opportunity Announcement (FOA) is provided below.

Date:	2 March 2020
Applicant Name:	McCurtain County Rural Water District 2
City, County, and State:	City of Millerton, McCurtain County, Oklahoma

The proposed project is expected to take 12 months to complete after notice to proceed. No work will take place on a federal facility or federal land.

Background Data

McCurtain County Rural Water District 2

McCurtain County Rural Water District 2 (MCRWD2) is the sole water supplier for the City of Millerton, Oklahoma and the surrounding areas. Millerton comprises a small community in the southeastern corner of the state; the city has a population of approximately 295 people.¹

MCRWD2 purchases raw water via a gravity feed line from the Broken Bow Public Works Authority (BBPWA), a major water wholesaler.² BBPWA sources its water from Broken Bow Lake, treating approximately 10 million gallons per day. MCRWD2 provides water to 341 users (almost exclusively residential) and has a total monthly demand of approximately 1,269,500 gallons.³ MCRWD2's service area and the Millerton municipal boundary are both shown in Figure 1. A full MCRWD2 system map is provided in Attachment 1.

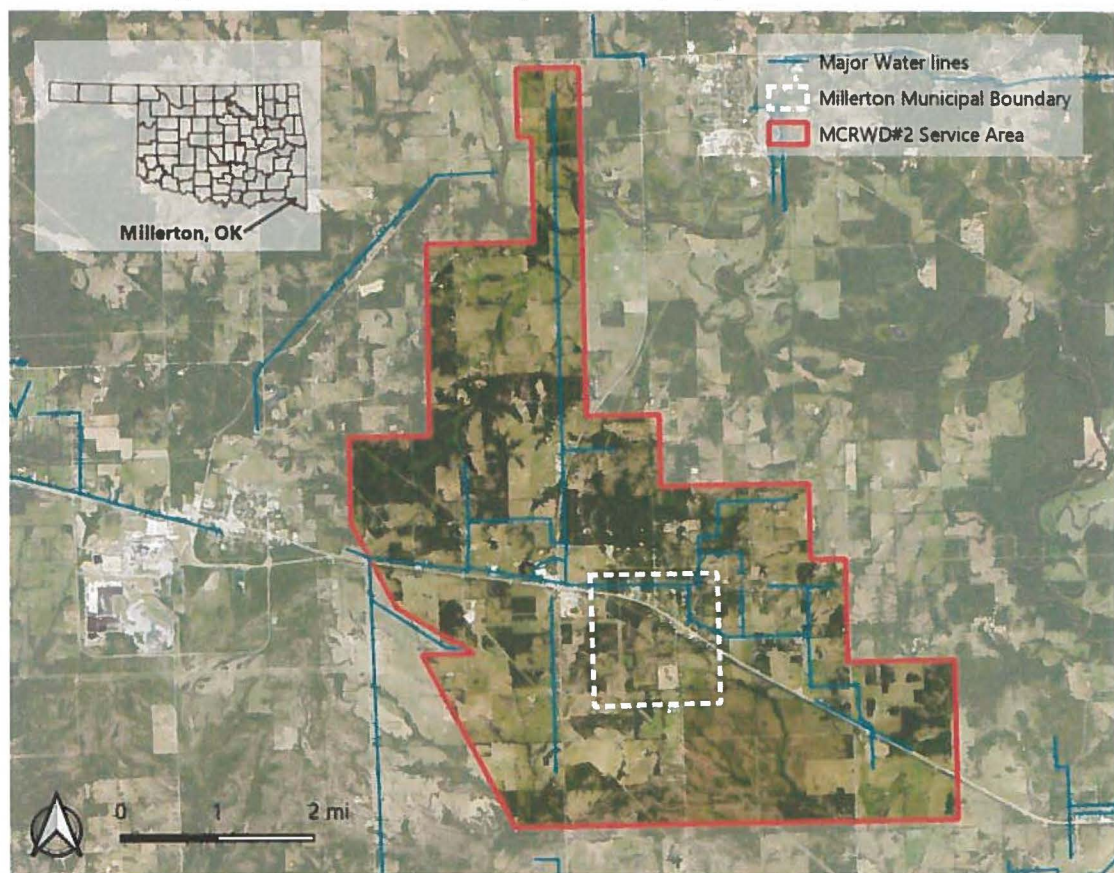


Figure 1: MCRWD2 service area and City of Millerton boundary

¹ Population estimate from 2018. See: <https://censusreporter.org/profiles/16000US4048600-millerton-ok/>

² <http://www.cityofbrokenbow.com/publicworks/>

³ Number of users is as of January 2020 and demand estimate was calculated from monthly supply data covering March 2019 through January 2020, inclusive.

MCRWD2 has consistently faced a high percentage of water loss (i.e. non-revenue water), as shown in Table 1. The average monthly loss over the past 11 months was 21.7 percent, with a high of 34.1 percent in April 2019. While the district has made thorough attempts to find and repair leaks and has also upgraded its water tracking and billing system, this loss rate has not improved. The district, therefore, fears that some portion of its existing water meters may not be accurate. MCRWD2 is currently in the process of mapping all 357 installed meters within its distribution system.⁴

Month	Monthly Total Usage	Total Gallons Purchased	Water Loss (gal)	Water Loss %
Mar-19	10,344	14,690	4,346	29.6
Apr-19	10,674	16,206	5,532	34.1
May-19	10,801	13,893	3,092	22.3
Jun-19	15,680	18,040	2,360	13.1
Jul-19	14,151	18,210	4,059	22.3
Aug-19	14,776	16,841	2,065	12.3
Sep-19	15,671	20,680	5,009	24.2
Oct-19	12,104	14,966	2,862	19.1
Nov-19	11,127	13,550	2,423	17.9
Dec-19	10,160	13,901	3,741	26.9
Jan-20	11,806	14,285	2,479	17.4
Average	12,481	15,933	3,452	21.7

Table 1: Water Usage, Purchases, and Losses for March 2019 through January 2020

Due to funding constraints, MCRWD2 has to date focused on system maintenance and postponed capital improvement projects, in an effort to avoid raising utility rates.⁵ The district currently has one full-time employee. The district board has approved the meter replacement activities described in this proposal, but the project has not been implemented to date due to funding limitations. The district has also previously pursued funding from the Oklahoma Water Resources Board, but has not yet been successful.

Past Relationship with Reclamation

McCurtain County Rural Water District 2 has not previously received USBR funding.

Project Location

The proposed project will take place wholly within the service area of MCRWD2, as shown in Figure 1.

⁴ The district maintains 16 inactive meters, as of January 2020.

⁵ This has been a particular goal of the district due to the high poverty rate of Millerton (approximately 27.5 percent). For more information, see: <https://censusreporter.org/profiles/16000US4048600-millerton-ok/>

Technical Project Description and Milestones

Project Activities

MCRWD2 will replace 350 traditional meters with new AMR (automatic meter reading) smart meters. Replacing these meters will provide accurate water use data to the district, useful for identifying and ultimately mitigating water losses within its water distribution system, and also ensure that the utility is able to better recover raw water costs. The following project activities are proposed, to be completed under properly procured contracts:

1. **Acquisition of smart meters and associated materials.** A bid from a qualified vendor has been included with this proposal as Attachment 2. This bid includes all required equipment for the district as well as initial training support.
2. **Installation of smart meters.** Installation will take place at all but seven current meter locations; Figure 2 provides the general locations of these meters. A bid has been received from a qualified contractor, included with this proposal as Attachment 3.



Figure 2: Map showing existing meter locations⁶

⁶ This is a draft map, as the meter mapping process is still underway.

Ultimately, the installation of these new meters will allow critical operational control of the water supply infrastructure and a more accurate estimate of water demands that would provide significant water and cost savings for the district.

Project Milestones

Table 2 provides a timeline for all activities proposed under this project.

Project Tasks and Milestones	Project Quarter			
	1	2	3	4
Receive Notice of Award				
Acquire materials and select installation contractor				
Install smart water meters				
Submit Interim Performance Report		•		
Submit Final Performance Report				•

Table 2: Proposed project timeline

Evaluation Criteria

Evaluation Criterion A – Project Benefits

Describe the expected benefits and outcomes of implementing the proposed project

MCRWD's water distribution system currently utilizes conventional meters throughout its distribution system, which it suspects are to blame for the high water loss rates it regularly experiences. Ultimately, the installation of new smart meters will allow critical operational control of the district's water supply infrastructure and a more accurate estimate of water demands, providing significant water and cost savings for the district. MCRWD's customers will also benefit from the ability to check meter readings more frequently, which could also encourage water conservation. As a supporter of Millerton and MCRWD2, the Choctaw Nation will also benefit from these improvements.

Evaluation Criterion B – Planning Efforts Supporting the Project

Describe how your project is supported by an existing planning effort

The Choctaw and Chickasaw Nations have begun a comprehensive regional water planning initiative for their jurisdictional homelands in Southeast Oklahoma. In this role, the Choctaw Nation has a vested interest in ensuring that communities across the region, including those in McCurtain County, are able to meet their water needs. A letter of support from the Choctaw Nation for the proposed project is provided in Attachment 4.

Evaluation Criterion C – Project Implementation

Table 2 outlines the major tasks, milestones, and schedule for the proposed project. The project is estimated to require 12 months for completion and includes installation of 350 AMR smart meters.

Project Reporting

Required reports will be submitted twice during project implementation. An interim performance report will be submitted after three months specifying project status, including a summary of project milestones as well as any cost revisions and potential issues impacting scheduled project completion. A final performance report will be submitted after the project has been completed and will include whether the project objectives and goals were met, a discussion of the benefits achieved by the project and any relevant documentation, including photos. Detailed engineering and design work is not required to implement the project. Environmental compliance costs are also not anticipated for the proposed project. The proposed project will not require permits. No new policies or administrative actions are expected to be required.

Evaluation Criterion D – Nexus to Reclamation

Is the proposed project connected to a Reclamation project or activity? If so, how?

The project is not connected to any Reclamation project or activity.

Will the project benefit any tribe(s)?

The project will benefit tribal members; the project will be implemented within the jurisdiction of the Choctaw Nation, and approximately 19 percent of the City of Millerton is Native American.⁷ The vice-chairman of the board for MCRWD2 is a member of the Choctaw Nation. The Choctaw Nation has a vested interest in ensuring that communities across the region, including those in McCurtain County, are able to meet their water needs. A letter of support from the Choctaw Nation for the proposed project is provided in Attachment 4.

Evaluation Criterion E – Department of the Interior Priorities

Up to 10 points may be awarded based on the extent that the proposal demonstrates that the project supports the Department of the Interior priorities. Please address those priorities that are applicable to your project

MCWRD2 will use the AMR smart meters to more efficiently manage their water supplies, including the identification and repair of significant water losses currently faced. Such water stewardship and conservation measures are a priority of the Department of the Interior. The project will also result in enhanced water reliability for local water users, which is also an initiative of the WaterSMART Program through which Reclamation works with tribal and other entities to increase water supply through infrastructure modernization and related activities.

From an environmental and ecosystem perspective, MCRWD's anticipated water efficiency increases will result in less water demand being placed on natural systems – in this case Broken Bow Lake. The Department of the Interior priority of supporting and enhancing the water and related economic security of Tribal Nations is also aligned with this project, as described in Evaluation Criterion D. Water security is improved through more efficient use of water and economic security is improved through decreased water losses and waste.

⁷ <https://censusreporter.org/profiles/16000US4048600-millerton-ok/>

(2) Project Budget

Funding Plan

How will you make your contributions to the cost share requirement, such as monetary and/or in-kind contributions and source funds contributed by the applicant (e.g. reserve account, tax revenue, and/or assessments)?

MCRWD2 has committed \$77,050 to the proposed project to pay for smart meter installation (i.e. contractor costs). To meet the total project cost of \$149,979 a federal match of \$72,929 is requested. The district passed a resolution (attached to this proposal in Attachment 5) supporting the funding for this project.

Describe any in-kind costs incurred before the anticipated Project start date that you seek to include as costs

No in-kind costs have been incurred to date.

Describe any funding requested or received from other Federal partners

There are currently no funding requests that would affect the proposed project.

Describe any pending funding requests that have not yet been approved, and explain how the Project will be affected if such funding is denied

There are currently no pending funding requests that would affect the proposed project. Estimated project funding sources are provided in Table 3.

Funding Source	Amount
Applicant	
McCurtain County Rural Water District 2	\$ 77,050
Federal	
Requested from Reclamation	\$ 72,929
Total Project Cost	\$ 149,979

Table 3: Total Project Cost

Budget Proposal

A budget proposal is included in Table 4.

Budget Item Description	Computation		Quantity Type	Federal Share	Match Share	Total Cost
	\$/Unit	Quantity				
Materials and Supplies						
Water Meter	\$192	350	Unit	\$67,085	\$0	\$67,085
Associated Hardware	\$3,844	1	Unit	\$3,844	\$0	\$3,844
Water Meter Boxes	\$130	335	Unit	\$0	\$43,550	\$43,550
TOTAL						\$114,479
Contractual Expenses						
Installation Contractor	100	335	Unit	\$0	\$33,500	\$33,500
Contractor Training	2000	1	Unit	\$2,000	\$0	\$2,000
TOTAL						\$35,500
GRAND TOTAL				\$72,929	\$77,050	\$149,979

Table 4: Budget Proposal

Budget Narrative

The following items provide descriptions of the proposed budget categories.

Salaries and Wages and Fringe Benefits: A small number of project management labor hours are expected to be contributed by the district; however, these costs are not included in the proposed budget.

Travel: Reimbursable travel is not required by the applicant for this project.

Equipment: No MCRWD2 equipment is expected to be used for the duration of this project.

Materials and Supplies: All smart meters and associated materials will be sourced from third-party suppliers.

Contractual: The smart meter installations, including provision of meter housing, will be completed by a qualified contractor. An existing, current bid for the installation project is included in Attachment 3. This bid has been deemed to be reasonable, and the amount included in the proposed budget is drawn from it.

Other: N/A

Indirect Costs: N/A

Environmental and Regulatory Compliance Costs: No environmental or regulatory compliance costs are anticipated for this project.

Total Costs: The total cost of this project is \$149,979. The amount of federal grant funding requested is \$72,929.

MCRWD2 is currently undergoing registration within the System for Award Management (under MPIN F73149453) and has a current DUNS Number of 068440729. The district will maintain an active SAM registration with current information at all times in which it maintains an active Federal award.

(3) Environmental and Cultural Resources Compliance

Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water quality and quantity), animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.

The proposed project will not significantly impact the surrounding environment. Installation of the project materials and supplies will occur within already developed areas of the district's service area.

Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?

The activities associated with the proposed project are not anticipated to affect any threatened or endangered species, or related critical habitat.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States?" If so, please describe and estimate any impacts the proposed project may have.

There are no impacts anticipated to wetlands or surface waters as a result of the proposed project.

When was the water delivery system constructed?

The original water system was first constructed in 1966, though gradual upgrades and improvements have been made since.

Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.

The proposed project will not affect any irrigation system.

Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.

No historic or eligible buildings, structures, or features will be affected by the proposed project activities.

Are there any known archeological sites in the proposed project area?

There are no known archeological sites in the proposed project area.

Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?

The proposed project will not have any adverse effect on low income or minority populations.

Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?

The proposed project will not limit access to or ceremonial use of Indian sacred sites. It will not result in any negative impacts to tribal lands.

Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?

The proposed project will not contribute to the introduction or spread of noxious weeds or invasive species.

(4) Required Permits or Approvals

No permits or approvals are expected to be required for any project activity.

(5) Letters of Project Support

A letter of support is provided from the Choctaw Nation in Attachment 4.

(6) Official Resolution

An official, signed resolution is provided in Attachment 5.

(7) Attachments

The following documents are attached to this application:

1. MCRWD2 System Map provided by Brown Engineering
2. Bid from SecureVision of America for smart meters and associated equipment
3. Bid from Nations Contracting for smart meter boxes and installation
4. Choctaw Nation Letter of Support
5. Official Resolution

Attachment 1: MCRWD2 System Map

Attachment 2: Bid from SecureVision of America

SecureVision of America,
 Inc.
 PO Box 218
 Fentress, TX 78622 US
 (501) 255-7760
 SecureVisionAccounting
 @yahoo.com



ADDRESS
 McCurtain #2

Quote 2375

DATE 02/11/2020

EXPIRATION DATE 03/31/2020

P.O. NUMBER
 Ready AMR

SALES REP
 Tom Gill

ACTIVITY	QTY	RATE	AMOUNT
Flow IQ 2100 RF 5/8 x 3/4 02U57C048UX, Flow IQ 2100 (25 GPM 5/8" x 3/4" x 7.5") - config 01-002-000-2-3-3-1-3, USG, central time,	350	191.67	67,084.50
READY Kit Basic Ready Converter Basic, 1 x Ready Converter to include whip antenna, 1 x wall adapter, 1 x 12 volt car adapter, 1 x micro usb cable, 1 x quick guide	1	600.00	600.00
Bluetooth Optical Head Bluetooth Optical Head 66-96-006	1	506.33	506.33
READY Manager 251 - 800 READY Manager, Encryption Key Management Software, 251 - 800 metering points, one time fee paid directly to Kamstrup Metering Llc.	1	1,638.00	1,638.00
READY Hosting and Support 251 - 800 Ready Software Hosting and Support Agreement, 251 to 800 metering points, this agreement is for a mandatory 5 year period and will automatically be billed to customer on and annual basis, Agreement includes, Access to Kamstrup Hosting Center, Necessary licenses for third party software used by READY Manager, Installation of READY Manager on Kamstrup approved server set up, Access to READY Manager for unlimited number of clients and two simultaneous users, back up of data, Security and virus protection of data, 24/7/365 surveillance and monitoring of hosting server, System support, includes "Getting Started", 2 users are included as standard, if hosting agreement is not terminated by the customer after 5 years, it will be prolonged for 1 year at a time. Fee to be paid annually direct to Kamstrup Metering Llc.	1	1,100.00	1,100.00

ACTIVITY	QTY	RATE	AMOUNT
Integration Training Services One day on site integration service to provide path to hosted system and test files. To include Monthly Cycle Reading with City employee for the first three monthly cycles after the installation.	1	2,000.00	2,000.00
5/8 x 3/4 Meter Install To remove and replace each 5/8" x 3/4" water meter, to include Hydra Vac of existing meter box as required, pictures of before, after, and final with landmark behind meter box for future reference, GPS coordinate recording of each location, and an electronic download file. Installation record database to be cloud accessible for 1 full year after project is complete. Meter installation includes gasket to gasket area and does not include any other service fittings or valves. The standard price for this service is \$50.00, and a \$5.00 discount shall be provided for the ownership of the old meters after removed from service.	0	45.00	0.00

^Please see quantity was revised to "0" on 2/13/2020 by Tracy Irwin.

TOTAL	\$72,928.83
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Accepted By

Accepted Date

Attachment 3: Bid from Nations Contracting

Nations Contracting, Inc.
PO Box 234
Millerton, Ok. 74750

Quote

Date	Invoice #
2/17/2020	2020-201

McCurtain RWD 2
PO Box 30
Millerton, Ok. 74750

Item	Description	Rate	Qty	Amount
Other	Meter Boxes	130.00	335	43,550.00
Other	Labor	100.00	335	33,500.00

	Total	\$77,050.00
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Balance Due	\$77,050.00
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Attachment 4: Letter of Support from Choctaw Nation



Choctaw Nation of Oklahoma

Water Resources Department
P.O. Box 1210, Durant, Oklahoma 74702-1210
Phone: (580) 924-8280 Toll Free: (800) 522-6170

Gary Batton

Chief

Jack Austin Jr.

Assistant Chief

February 28, 2020

Mr. Matthew Reichert
Bureau of Reclamation
Financial Assistance Services
P.O. Box 25007, MS 84-27814
Denver, CO 80225

RE: FY20 WaterSMART Small-Scale Water Efficiency Project for the City of Durant

Dear Mr. Reichert:

The Choctaw Nation of Oklahoma whole-heartedly supports the McCurtain County Rural Water District #2's application to install smart water meters throughout its systems. As with many communities in southeastern Oklahoma, the McCurtain County Rural Water District #2 is plagued with infrastructural issues and continued pressure from increasing demand for water resources. This project will assist this rural water district with minimizing water losses, increase revenue by replacing old meters, and enable them to be better stewards of southeastern Oklahoma's water resources.

Choctaw Nation places a high priority on sustainable practices and projects. The installation of these smart meters in McCurtain County Rural Water District #2's distribution lines will enable them to properly account for their water and decrease losses of the finished product. This project will assist our tribal members receiving services from the Rural Water District, decrease water demand from local reservoirs, and aligns with the Choctaw Nation of Oklahoma's cultural value of sustainability.

The Choctaw Nation of Oklahoma appreciates this opportunity to state its unwavering support of the McCurtain County Rural Water District #2's application to increase efficiency and sustainability by installing smart water meters on their distribution systems. Please contact me at 580-579-9291 or eschuth@choctawnation.com should you require any additional information concerning our advocacy of this proposed project.

Sincerely,

Ethan Schuth

Ethan Schuth
Water Resource Manager
Choctaw Nation of Oklahoma

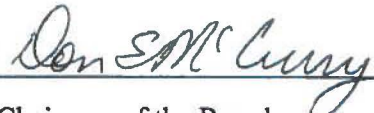
Attachment 5: Official Resolution

Resolution

Approving McCurtain County Rural Water District #2 to submit a grant application to the US Bureau of Reclamation for financial assistance in replacing water meters

Whereas, McCurtain County Rural Water District #2 seeks authorization to submit a proposal to the US Bureau of Reclamation in response to the FY 2020 WaterSMART Small-Scale Water Efficiency Projects grant funding opportunity to install new smart water meters within its distribution network. This project will reduce water losses and more effectively manage water demand. Whereas the proposal will request \$72,929 in federal grant funding requiring a cost share match from McCurtain County Rural Water District #2 in the amount of \$77,050. McCurtain County Rural Water District #2 cost share will consist of funds used for meter housing and installation expenses.

Now therefore the Board members of McCurtain County Rural Water District #2 do hereby authorize district staff to submit a proposal to the US Bureau of Reclamation seeking funds to purchase new smart meters.



Chairman of the Board

2-28-2020
Date



Vice-chairman of the Board

2-28-2020
Date



Member of the Board

2-28-2020
Date

Member of the Board

Date