Deutsch Domestic Water Company, Inc

PO Box 45, Crawford, Colorado 81415 | (907) 232-4409 | hobbsalaska@msn.com

December 17, 2021

Ben Wade
Water Supply Planning
Colorado Water Conservation Board
1313 Sherman Street, Room 718
Denver, Colorado 80203

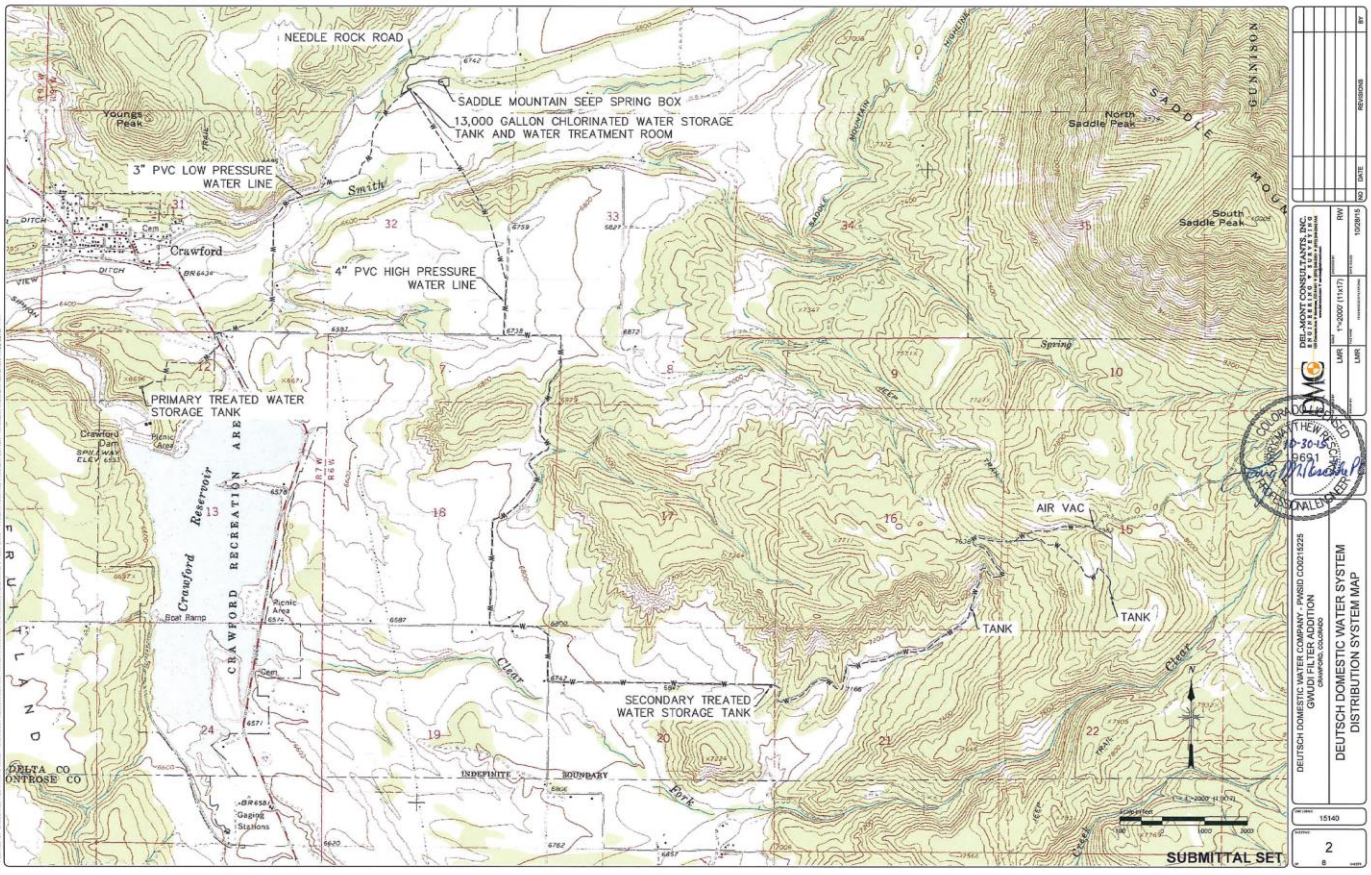
Re: Water Efficiency Grant – POGGI PDAA 2022-2322

Sub: **25% Progress Report**

Ben,

DDWC has completed Tasks 1 & 2 of the Drought Management Plan and hereby submits the 25% Progress Report indicating the "essential" elements that have been completed:

DDWC Service Area



Task 1 – Introduction and Stakeholders, Plan Objectives and Principals

DDWC Staff Meeting #1 – Kickoff Meeting with engineers (held Oct 10, 2021).

DDWC Drought Planning Committee Meeting #1 – Kickoff Meeting with staff and engineers (held Nov 7, 2021).

1.1 Drought Planning Committee

1.1.1 DDWC staff and engineers have defined the role of the Drought Planning Committee to be participation and oversight in developing the overall Plan (meeting agenda attached).

1.1.2 DDWC staff, in coordination with the engineers, selected the following members to be involved as stakeholders through the development of the Plan:

1. Austin Hobbs — Stakeholder & President overseeing operations
2. Lori Hobbs — Stakeholder & Manager overseeing customer relations
3. Tyrel Stacey — Stakeholder & Engineer overseeing technical & design issues
4. Benny Archuleta — Operator in Charge overseeing water quality issues
5. Kermit Pipher — Stakeholder & Maintenance Manager
6. Tim Cook — Stakeholder & future manager in training

1.2 Objectives of Drought Management Plan

1.2.1 DDWC staff and engineers have discussed the major objectives of the Plan, how these objectives fit within broader water planning efforts and operating principals:

- DDWC now taking a proactive approach to tracking local drought conditions, forecasts, monitoring spring flows, and being better prepared to mitigate drought impacts while completing the Drought Management Plan.
- DDWC now preparing for likelihood of extended conditions into 2022.

1.2.2 DDWC staff and engineers have discussed how the objectives for the Plan reflect the water use priorities during a drought, such as:

- Assessing and understanding how past droughts impacted operations.
- Evaluating conservation and water efficiency issues to determine how best to mitigate drought impacts while providing operational benefits.

1.2.3 DDWC staff and engineers have developed a list of water use priorities for the Plan, such as:

- Reducing waste and non-essential uses.
- Finding and repairing distribution system leaks.
- Installing strategically placed storage to capture off-peak spillage to help meet on-peak demands.
- Investigating supplemental and backup water supply resources.

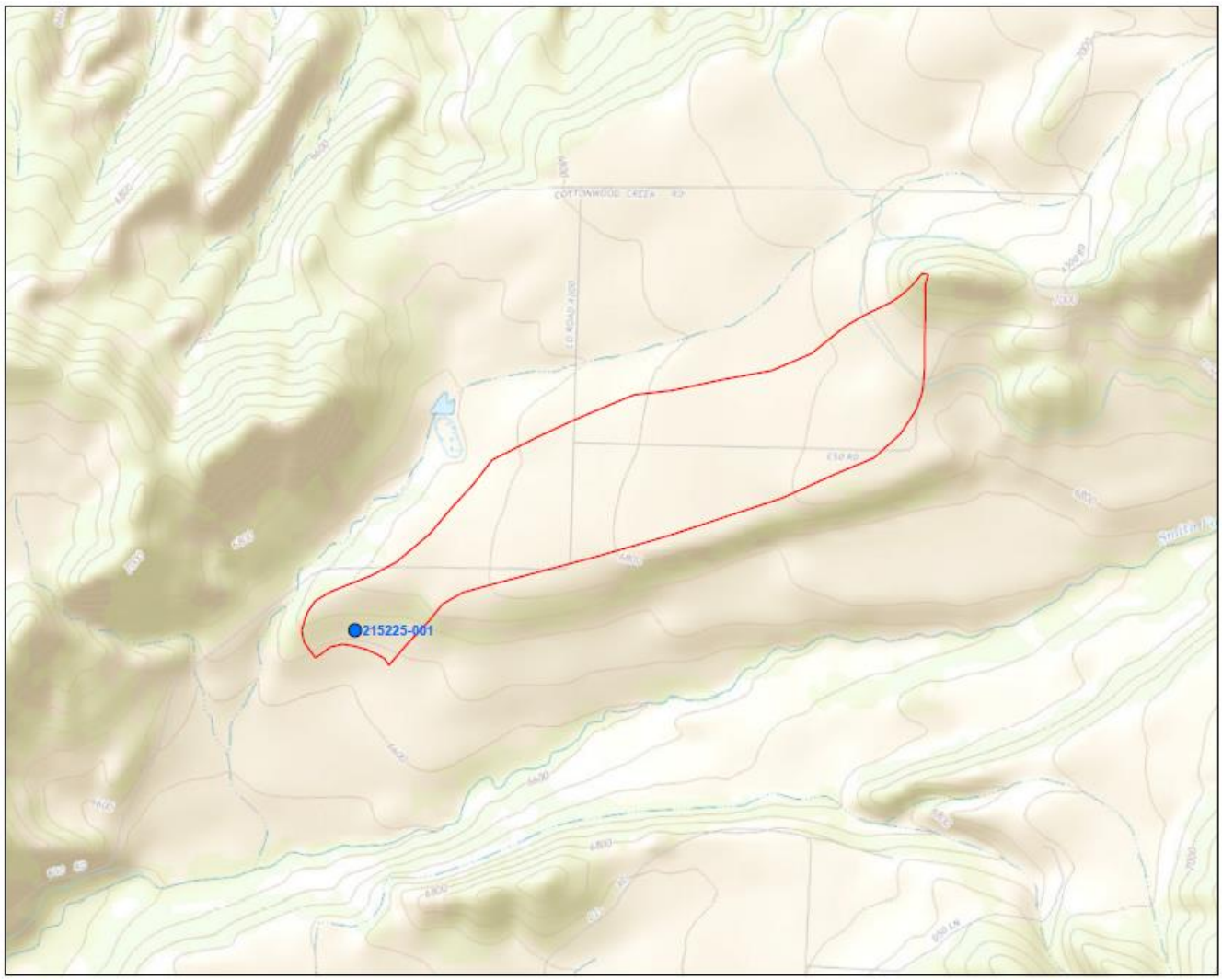
Task 2 – Historical Drought Impact and Assessment

2.1 Historical Assessment of Drought, Available Supplies and Demands

2.1.1 DDWC has collected historical information that includes spring flow data, precipitation, and water quality data, to identify significant previous/current droughts and how they affected the water company's water supply, such as:

- DDWC has confirmed a 20% to 40% reduction in spring flows that correlate with historical droughts.

DDWC Spring No 1 (Saddle Mountain Seep)
Source Water Area



2.1.2 DDWC has described the existing operational factors, concepts, and terms essential to public communications (i.e., water rights, spring flows & water efficiencies), such as:

- Closely monitoring drought conditions and spring flows and keeping tap holders informed of potential impacts and mitigation measures.
- Reducing waste, excess, and non-essential uses.

2.1.3 DDWC has outlined the water demands during previous droughts, that includes per-capita water demands (GPCD), demands by customer type, indoor and outside water uses, etc.

- DDWC has provided attached report to Division 4 of the Colorado District Water Court that includes per-capita water demands, demands by customers type and outside water uses for previous 5-year period and what forecasted for next 5-years.

DDWC Retail Water Deliveries over Past 5-Years (acre-feet/yr)						**Average**	
years	2016	2017	2018	2019	2020	**2016-2020**	**Percent**
			(drought yr)				
Water Supply	65.3	65.3	45.0	65.3	65.3	**61.3**	**100%**
Customer Category							
Residential	24.7	24.7	23.3	26.7	28.2	25.5	42%
Commercial	0.6	0.6	0.6	0.6	0.6	0.6	1%
Irrigation	2.0	2.0	1.5	2.1	2.2	1.9	3%
Live Stock	2.0	2.0	1.8	2.0	2.0	2.0	3%
Total Deliveries	**29.3**	**29.3**	**27.1**	**31.3**	**33.0**	**30.0**	**49%**
Spillage	36.1	36.1	17.9	34.1	32.4	**31.3**	**51%**
GPCD							
Residential Taps						150	100%
Active Taps	63	63	66	68	72	66	44%
Population	221	221	231	238	252	232	
Residential GPCD	100.0	100.0	90.0	100.0	100.0	98.0	
Total GPCD	**118.5**	**118.5**	**104.9**	**117.3**	**116.8**	**115.2**	

DDWC Projected Retail Water Deliveries over Next 5-Years (acre-feet/yr)						Average	
years	2021	2022	2023	2024	2025	2021-2025	Percent
	(drought yr)						
Water Supply	45.0	65.3	65.3	65.3	65.3	**61.3**	**100%**
Customer Category							
Residential	26.5	31.0	32.5	34.1	35.7	31.9	52%
Commercial	0.6	0.6	0.6	0.6	0.6	0.6	1%
Irrigation	1.5	2.3	2.4	2.5	2.6	2.3	4%
Live Stock	1.8	2.0	2.0	2.0	2.0	2.0	3%
Total Deliveries	**30.3**	**35.8**	**37.5**	**39.2**	**40.9**	**36.7**	**60%**
Spillage	14.7	29.5	27.8	26.1	24.5	**24.5**	**40%**
GPCD							
Residential Taps						150	100%
Active Taps	75	79	83	87	91	83	55%
Population	263	277	291	305	319	291	
Residential GPCD	90.0	100.0	100.0	100.0	100.0	98.0	
Total GPCD	**103.1**	**115.7**	**115.3**	**114.9**	**114.6**	**112.7**	

2.2 Historical Drought Impact, Mitigation and Response Assessment

2.2.1 DDWC has utilized and attached Worksheet A from the Guidance Document to provide a list of historical and current drought related impacts.

2.2.2 DDWC has utilized and attached Worksheets B & C from the Guidance Document to provide a list of historical demand and supply-side mitigation measures that were employed to minimize impacts during previous/current droughts.

2.2.3 DDWC has utilized and attached Worksheets B & C from the Guidance Document to show the overall effectiveness of drought response measures employed during previous/current droughts.

25% Progress Report

This Progress Report indicates the "essential" elements for Tasks 1 & 2 that have been completed, such as:

1. Defining the role of the Drought Planning Committee in the development of the Plan:
    - Participation on multiple levels.
    - Review and oversight.
    - Public outreach and feedback.
2. Creating list of objectives and operating principals:
    - Reducing waste, excess and non-essential uses.
    - Finding and repairing distribution system leaks.
    - Closely monitoring drought conditions and spring flows.
    - Installing strategically placed storage to capture off-peak spillage to help meet on-peak demand.
    - Investigating supplemental and backup water supply resources.
3. Discussion of significant historical droughts and how they affected water supplies:
    - During the 2001-2002 drought, DDWC was only serving about 20 residential customers and had sufficient spring flow to meet demand.
    - By time of the 2018 drought, DDWC had expanded to serve about 70 residential customers, was unprepared, and did not have enough spring flow to meet demand and had to resort to severe water use curtailments and rotating outages.
    - During the current 2021-2022 drought, DDWC has been better prepared but have still had to resort to curtailing outside water use during summer months.
4. Impacts experienced during historical and current droughts:
    - Not enough spring flow to meet customer demand during summer months.
    - Strained relationships from asking customers to reduce or curtail outside uses.
5. Mitigation measures historically employed to minimize drought impacts:
    - Closer monitoring customers outside and non-essential uses.
    - Asking customers to curtail outside and non-essential uses.
    - Increasing rates for excess and non-essential uses.
6. Drought response measures employed during previous droughts and overall effectiveness:
    - Closer monitoring of drought conditions and spring flows.
    - More frequent communications with customers regarding drought conditions, ability to meet system demands, and mitigation measures being employed.
    - Was effective with a majority of customers with only a few disregarding all efforts to mitigate drought impacts.

DDWC has also begun working with the local Water Commissioner to more accurately collect and record spring and system flows (on a monthly basis) and advise on supplemental and/or backup water resources that DDWC might employ to help mitigate drought impacts.

Please let me know if you have questions and/or would like more information.

Thanks,

Austin R Hobbs
President
(907) 232-4409