Central Iowa Regional Water Workgroup



Phase 2: Workshop No. 1

April 23, 2018





- Introductory Remarks
- Recap of Phase 1
- Preview of Phase 2
- Phase 2 Information Requests
- Meeting Calendar

Introductory Remarks

Review of the process

PHASE 1

- A number of communities came together to formally discuss a regional water utility
- Various options discussed
- Selected option we prefer to explore first-asset transfer

• <u>PHASE 2</u>

- Financial analysis
- Determine buy-in of communities
- Establishment of a technical committee and steering committee

• <u>PHASE 3</u>

- Decisions of each board/ community on interest in the asset transfer model
- Additional options could be explored to accomplish goal of regionalization



Formalize our process

Selection of a chair of the Steering Committee for Phase 2

Selection of Co-Chairs of the Technical Committee

Recap of Phase 1



It's amazing that we can take THIS MANY PEOPLE from THIS MANY ENTITIES and, in six months, have got as far as we have on THIS ISSUE"

- Mayor Gaer with Mayors Cownie, Andeweg, and Lorenz, interview with Des Moines Register 1/17/18







Reached consensus or unanimous agreement

Work in progress and close to consensus

Tabled for next phase

+ 1 Key issue identified and addressed after starting



Consensus or Unanimous Agreement	Work in Progress	Tabled for Phase 2
Obligation to Serve	Authority of Board	Rate Setting Framework
Right to Serve	Structure of Board	Proof of Cost Efficiency
Capitalization	Asset Inclusion	Better Cost Control
Accounting Framework		
Operational Authority		
Planning Authority		
Existing Staff Concerns		
Measuring Demands		
Operating Agreements		

* One other issue tabled for implementation phase: "organizational chart"





Subscribed capacity is contributed, and reserve capacity is sold to Authority. Authority owns and operates (via operating agreements) the water production assets and sells water wholesale to Members. Governed by new Board overseeing regional water production matters. Members purchase water supplies from Authority, own/operate all distribution facilities, govern all local matters including local rates and charges. Individual customers purchase water from Member agencies same as today.



Separate Board with Regional Representation

Sole Provider of Water Production for Members

Regional Authority - Required to Provide Service for Members

Separate Accounting, Financing, Rate Setting

Owns and Operates Water Production for Region

Plans for and Constructs any New Water Production

INDEPENDENT

RESPONSIBLE

REGIONAL

Preview Phase 2









Economics What are the costs and benefits ? Service Level Can we provide the same services at the same quality?

Governance How will parties participate, and what will govern behaviors?

FCS GROUP







Can the regionalization save money for everyone?



Is the money saved worth the change in local control?

BUSINESS CASE



- What are the water production costs for each community assuming there is no regional Authority and operations continue as they are today?
- 2. What are the costs the regional Authority would most likely charge as a wholesale rate to individual communities all things considered?
- 3. What are the likely costs for each community assuming water production services are provided by the Authority?
- 4. For each community, how do the expected future costs compare with and without the regional Authority?



Avg. Cost per 1,000 Gallons- Community X

-Status Quo -Regional



Difference between the two scenarios will define the net benefit / cost at the community and regional levels



• Scale...or the lack thereof

 Any fixed cost divided by more units of service results in a lower average cost per unit.

Real cost differences from efficiencies

- Project efficiencies....e.g. projects at community level are sub-optimal in size leading to a higher total average cost per unit.
- Financing efficiencies....e.g. borrowing costs are higher for smaller organizations leading to higher capital costs.
- Avoided costs...e.g. leveraging regional capacity avoids near-term investment in local capacity.



Diagram Economies of Scale



- LRAC is total cost divided by units produced
- For a given plant capacity, producing at Q2 results in the best price, P2
- Producing below Q2 is suboptimal



Based on total "Shared System Costs" for 2016 Source: 2016 DMWW Cost-of-Service



Information Requests



- Things that help forecast Demand....quantity
- Things that help forecast Total Cost
 - Investments
 - Operating costs
 - Financing
- Things that help define the above Today and in the Future





Greetings!

As you probably know by now, we(FCS Group) have recently received approval to begin our work in evaluating the financial and economic considerations concerning the proposed formation of a Regional Water Authority. Attached, you will find an information request tailored specifically to you and your community. The information request is vital to our work. You could say, quite accurately, that we will not get very far in our evaluation without the information and data requested in the attachment.

Your information request includes a personal point of contact on our FCS Group team. That person has been assigned to you and can assist when needed. Please feel free to contact your FCS Group Coordinator with any questions you or others in your organization may have.

We are asking for responses to our request by May 4th – approximately two weeks from now. Please make every effort to meet the deadline, but let us know if you're having difficulty gathering the information. We do not wish to move quickly as much as we want our work to be as accurate

- Total of 14 requests set to communities
 - Producers
 - Potential Producers
 - Wholesale
- Total Service customers did not receive info request
- Need the materials back by May 4th



- Historical production expense
- Existing debt service on production assets
- Future capital improvements for water production
- Plans for constructing new or expanding existing water production
- Verify/validate demand and growth projections from the LRP



Max Day Demand on DMWW (MGD)





Max Day Demand (MGD)



Meeting Calendar



- May 4
 - Not a meeting, but information requests due
- June 25
 - Status quo forecasts
 - Preliminary regional cost-sharing framework (will need feedback here)
- July 30
 - Regional cost estimates and cost-sharing framework
 - Preliminary forecast of costs under regional case
- August 27
 - Comparison of status quo and regional cases

Additional Information



Year	Population	Avg. Daily Demand on DMWW (MGD)	Avg. Daily Demand – Owned Production (MGD)	Max Daily Demand on DMWW (MGD)	Max Daily Demand – Owned Production (MGD)	Total Avg. Daily Demand (MGD)	Total Max Daily Demand (MGD)
2015	15,000	0.0	1.78	0.00	3.94	1.78	3.94
2020	19,340	0.0	2.30	1.09	4.00	2.30	5.09
2025	23,208	0.0	2.76	2.10	4.00	2.76	6.10
2030	27,075	0.0	3.22	3.12	4.00	3.22	7.12
2035	32,490	0.0	3.87	4.54	4.00	3.87	8.54
2040	37,905	0.0	4.00	5.97	4.00	4.51	9.97



Year	Population	Avg. Daily Demand on DMWW (MGD)	Avg. Daily Demand – Owned Production (MGD)	Max Daily Demand on DMWW (MGD)	Max Daily Demand – Owned Production (MGD)	Total Avg. Daily Demand (MGD)	Total Max Daily Demand (MGD)
2015	218,276	21.20	0.00	42.39	0.00	21.20	42.39
2020	233,265	21.60	0.00	43.20	0.00	21.60	43.20
2025	241,117	22.01	0.00	44.02	0.00	22.01	44.02
2030	248,968	22.43	0.00	44.85	0.00	22.43	44.85
2035	257,406	23.17	0.00	46.33	0.00	23.17	46.33
2040	265,844	23.93	0.00	47.85	0.00	23.93	47.85



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2015	4,067	0.43	0.00	0.90	0.00	0.43	0.90
2020	5,722	0.60	0.00	1.26	0.00	0.60	1.26
2025	6,365	0.67	0.00	1.41	0.00	0.67	1.41
2030	7,080	0.74	0.00	1.55	0.00	0.74	1.55
2035	7,877	0.83	0.00	1.74	0.00	0.83	1.74
2040	8,762	0.92	0.00	1.93	0.00	0.92	1.93



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2015	62,000	0.00	7.17	6.12	10.00	7.17	16.12
2020	71,863	0.00	8.62	8.90	10.00	8.62	18.90
2025	78,178	0.00	9.38	10.56	10.00	9.38	20.56
2030	83,493	0.02	10.00	11.96	10.00	10.02	21.96
2035	89,496	0.74	10.00	13.54	10.00	10.74	23.54
2040	95,500	1.46	10.00	15.10	10.00	11.46	25.10



Preliminary Grouping: Potential Producer

Year	Population	Avg. Daily Demand on DMWW (MGD)	Avg. Daily Demand – Owned Production (MGD)	Max Daily Demand on DMWW (MGD)	Max Daily Demand – Owned Production (MGD)	Total Avg. Daily Demand (MGD)	Total Max Daily Demand (MGD)
2015	54,598	6.14	0.00	13.32	0.00	6.14	13.32
2020	62,298	7.02	0.00	15.23	0.00	7.02	15.23
2025	71,544	8.08	0.00	17.53	0.00	8.08	17.53
2030	81,546	9.22	0.00	20.01	0.00	9.22	20.01
2035	92,925	10.51	0.00	22.81	0.00	10.51	22.81
2040	102,310	11.58	0.00	25.13	0.00	11.58	25.13



Preliminary Grouping: Potential Producer

Year	Population	Avg. Daily Demand on DMWW (MGD)	Avg. Daily Demand – Owned Production (MGD)	Max Daily Demand on DMWW (MGD)	Max Daily Demand – Owned Production (MGD)	Total Avg. Daily Demand (MGD)	Total Max Daily Demand (MGD)
2015	43,464	4.00	0.00	9.67	0.00	4.00	9.67
2020	48,345	4.63	0.00	11.22	0.00	4.63	11.22
2025	52,081	5.12	0.00	12.38	0.00	5.12	12.38
2030	56,106	5.65	0.00	13.67	0.00	5.65	13.67
2035	60,442	6.24	0.00	15.09	0.00	6.24	15.09
2040	65,114	6.89	0.00	16.67	0.00	6.89	16.67



Preliminary Grouping: Potential Producer

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2015	20,000	1.91	0.00	4.78	0.00	1.91	4.78
2020	23,460	2.25	0.00	5.63	0.00	2.25	5.63
2025	28,295	2.53	0.00	6.31	0.00	2.53	6.31
2030	33,130	3.24	0.00	8.11	0.00	3.24	8.11
2035	38,407	4.09	0.00	10.22	0.00	4.09	10.22
2040	44,524	4.72	0.00	11.80	0.00	4.72	11.80



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2015	5,236	0.52	0.00	1.05	0.00	0.52	1.05
2020	5,631	0.56	0.00	1.13	0.00	0.56	1.13
2025	5,987	0.60	0.00	1.20	0.00	0.60	1.20
2030	6,344	0.63	0.00	1.27	0.00	0.63	1.27
2035	6,753	0.68	0.00	1.35	0.00	0.68	1.35
2040	7,162	0.72	0.00	1.43	0.00	0.72	1.43



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2015	18,355	2.22	0.00	5.08	0.00	2.22	5.08
2020	19,500	2.35	0.00	5.39	0.00	2.35	5.39
2025	21,500	2.59	0.00	5.95	0.00	2.59	5.95
2030	23,500	2.84	0.00	6.50	0.00	2.84	6.50
2035	23,750	2.87	0.00	6.57	0.00	2.87	6.57
2040	24,000	2.90	0.00	6.64	0.00	2.90	6.64



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2015	11,092	0.00	1.10	0.00	1.99	1.10	1.99
2020	16,594	0.00	1.66	0.00	3.32	1.66	3.32
2025	21,179	0.00	2.12	0.78	3.46	2.12	4.24
2030	27,030	0.00	2.70	1.95	3.46	2.70	5.41
2035	32,030	0.00	3.20	2.95	3.46	3.20	6.41
2040	37,030	0.25	3.46	3.95	3.46	3.70	7.41



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2015	18,033	1.78	0.00	3.53	0.00	1.78	3.53
2020	20,962	2.84	0.00	9.30	0.00	2.84	9.30
2025	23,000	3.11	0.00	10.21	0.00	3.11	10.21
2030	24,980	3.38	0.00	11.09	0.00	3.38	11.09
2035	27,000	3.65	0.00	11.98	0.00	3.65	11.98
2040	29,000	3.92	0.00	12.87	0.00	3.92	12.87



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2015	10,287	1.03	0.00	2.06	0.00	1.03	2.06
2020	11,830	1.18	0.00	2.37	0.00	1.18	2.37
2025	13,605	1.36	0.00	2.72	0.00	1.36	2.72
2030	15,645	1.56	0.00	3.13	0.00	1.56	3.13
2035	17,992	1.80	0.00	3.60	0.00	1.80	3.60
2040	20,691	2.07	0.00	4.14	0.00	2.07	4.14



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2015	N/A	1.62	0.00	3.32	0.00	1.62	3.32
2020	16,323	1.70	0.00	3.52	0.00	1.70	3.52
2025	17,194	1.79	0.00	3.71	0.00	1.79	3.71
2030	18,111	1.89	0.00	3.91	0.00	1.89	3.91
2035	18,950	1.97	0.00	4.09	0.00	1.97	4.09
2040	19,789	2.06	0.00	4.26	0.00	2.06	4.26



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2015	N/A	1.16	0.00	2.08	0.00	1.16	2.08
2020	N/A	1.59	0.00	2.87	0.00	1.59	2.87
2025	N/A	2.03	0.00	3.66	0.00	2.03	3.66
2030	N/A	2.47	0.00	4.44	0.00	2.47	4.44
2035	N/A	2.47	0.44	5.23	0.79	2.91	6.02
2040	N/A	2.47	0.87	6.02	1.57	3.34	7.59



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2015	675	0.07	0.00	0.12	0.00	0.07	0.12
2020	743	0.07	0.00	0.13	0.00	0.07	0.13
2025	817	0.08	0.00	0.15	0.00	0.08	0.15
2030	898	0.09	0.00	0.16	0.00	0.09	0.16
2035	988	0.10	0.00	0.18	0.00	0.10	0.18
2040	1,087	0.11	0.00	0.20	0.00	0.11	0.20



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2015	558	0.06	0.00	0.10	0.00	0.06	0.10
2020	713	0.07	0.00	0.13	0.00	0.07	0.13
2025	935	0.09	0.00	0.17	0.00	0.09	0.17
2030	1,156	0.12	0.00	0.21	0.00	0.12	0.21
2035	1,430	0.14	0.00	0.26	0.00	0.14	0.26
2040	1,704	0.17	0.00	0.31	0.00	0.17	0.31



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2015	11,578	1.19	0.00	1.97	0.00	1.19	1.97
2020	14,371	1.47	0.00	2.45	0.00	1.47	2.45
2025	15,018	1.54	0.00	2.56	0.00	1.54	2.56
2030	15,693	1.61	0.00	2.67	0.00	1.61	2.67
2035	16,400	1.68	0.00	2.79	0.00	1.68	2.79
2040	17,138	1.76	0.00	2.92	0.00	1.76	2.92



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2015	13,011	1.30	0.00	2.34	0.00	1.30	2.34
2020	14,581	1.46	0.00	2.62	0.00	1.46	2.62
2025	15,571	1.56	0.00	2.80	0.00	1.56	2.80
2030	16,555	1.66	0.00	2.98	0.00	1.66	2.98
2035	17,600	1.76	0.00	3.17	0.00	1.76	3.17
2040	18,636	1.86	0.00	3.35	0.00	1.86	3.35



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2015	594	0.06	0.00	0.11	0.00	0.06	0.11
2020	653	0.07	0.00	0.12	0.00	0.07	0.12
2025	719	0.07	0.00	0.13	0.00	0.07	0.13
2030	791	0.08	0.00	0.14	0.00	0.08	0.14
2035	870	0.09	0.00	0.16	0.00	0.09	0.16
2040	957	0.10	0.00	0.17	0.00	0.10	0.17



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2015	4,200	0.42	0.00	0.84	0.00	0.42	0.84
2020	4,450	0.45	0.00	0.89	0.00	0.45	0.89
2025	4,470	0.45	0.00	0.89	0.00	0.45	0.89
2030	4,490	0.45	0.00	0.90	0.00	0.45	0.90
2035	4,510	0.45	0.00	0.90	0.00	0.45	0.90
2040	4,530	0.45	0.00	0.91	0.00	0.45	0.91