Headley, Kim

From: Rosa McCormick [rosa@fountaincolorado.org]
Sent: Monday, December 20, 2010 3:20 PM
To: jhouk@ttplan.net; Duane Greenwood; coleemmons@elpasoco.com; elainekleckner@elpasoco.com; rmuzzy@ppacg.org; Headley, Kim; nkeller@pueblo.us; fsdmanager@qwestoffice.net; greg.langer@co.usda.gov; barbergl@aol.com; dmaroney@pueblo.us; frederick.williams@usafa.af.mil; Scott_Stevens@URSCorp.com; dbare@springsgov.com; bruce.eric.miller@us.army.mil; CBaker@csu.org; michael@pprbd.org
Subject: FW: USGS Draft Proposal - Fountain Creek Management Strategies

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From: Dennis Maroney [mailto:dmaroney@pueblo.us]
Sent: Monday, December 20, 2010 3:05 PM
To: Rosa McCormick
Subject: FW: USGS Draft Proposal - Fountain Creek Management Strategies

Please distribute to all TAC members
-----Original Message-----
From: Bare, Dan [mailto:dbare@springsgov.com]
Sent: Monday, December 13, 2010 9:32 AM
To: Dennis Maroney
Subject: USGS Draft Proposal - Fountain Creek Management Strategies

This is resent after initial return as undeliverable.

Dennis,

As discussed at the last two TAC meetings, I have questions about the scope and methods to be used as proposed by the USGS in the Draft Proposal, dated September, 17, 2010, to address flood control and sedimentation issues within the Fountain Creek watershed. Some of my initial concerns are as follows:

1. The study needs to be conducted within the context of the 1041 permit which requires that any flood control project have a "significant" benefit on potential flooding in Pueblo. Criteria for defining what a "significant" benefit is should be established. This needs to be based on defining the nature of the problem(s) being solved.
2. It appears that only strategies that attenuate storm flows will be considered. Should not other options, like channel dredging, levee construction or floodwalls also be considered?
3. Since project costs will not be provided for the management strategies evaluated, how will the various strategies be evaluated for how well they mitigate flooding and sediment problems?
4. How will the implementation of detention storage in developing areas be accounted for? If implemented, this will significantly address increases in peak flows due to development that the study is intended to evaluate.
5. The hydrologic model being used is based on the Corps/URS study. This model is based on a future land use condition estimated for the year 2025. Is this an adequate time frame for evaluating long term flood control projects? (this issue is also related to item 3 above)
6. The proposal seems to indicate that two very different types of hydrologic analyses will be completed. One to consider flood conditions and one to consider long term erosion/sedimentation conditions. These seem to require two very different types of models; one being a "single event" model and one being a "continuous simulation" model. Application of the available hydrology model from the Corps/URS study to the study purposes will require a significant adaptation of the model to one suitable for a continuous simulation as proposed. Because long term stream flows are affected by groundwater return flows, this aspect of the

rainfall/runoff relationship will also need to be modeled to properly represent sediment transport conditions in the watershed.

7. The hydraulic model used in the Corps/URS study did not include immovable bed features such as culverts, drop structures, or bedrock that will be necessary to adequately represent channel bed conditions for sediment transport modeling. Including these features to adapt the hydraulic model for sediment transport needs to be considered. Additional cross-sections may also be necessary to represent these features.
8. Recent efforts by URS to adjust channel routing parameters in the lower reaches of Fountain Creek should be considered for incorporation into the "calibrated" runoff model. This will likely require an agreement with URS to obtain this information or an additional task in the scope.
9. In addition to the April, 1999 storm (which occurred over a few days) standard project storms will be evaluated. It is not stated how the characterization of these storms will be done related to temporal and spatial distribution. The approach to this issue will have a significant effect on the results.
10. Calibration of a model requires that historic basin conditions, historic input (rainfall) and historic output (stream flow) be known. Since most of the historic flood flows in the gage data occurred many decades ago, the basn conditions and rainfall events that produced those events are not available . The best record of historic flood flows is contained in the flow gage data on Fountain Creek. How will this data be used to calibrate or validate the runoff model?
11. Data collection related to sediment is planned during the two year period of the study and the amount of data to be collected will be limited by the few events that occur during this period. Therefore, it is unlikely that adequate data can be collected to significantly benefit the calibration efforts of the study.
12. It is intended that "managers" be trained in the use of the models produced. Given the expertise required to understand and manipulate these types of models, this does not seem practice and even if the expertise was available, I doubt that available "managers" would have the time to complete the necessary evaluations.
13. The type of design storm that will be used to evaluate possible management scenarios is not specified, but will be critical to any kind of strategy evaluations.
14. The best available rainfall for the April, 1999 storm event can be obtained from radar data. The application of this data requires a specialized analysis of the radar data to calibrate it and put it into a format for entry into the runoff model. This will require a contract with a third party. Radar data for other periods may also be more useful than the rainfall gage data that is proposed and should be considered.
15. Once the continuous simulation model is calibrated using historic data how will long term input for future conditions be created?

It may be that the USGS is aware of these issues and has considered them in their proposal, but it is not clear to me that this is the case. I would like to discuss these issues with the USGS so that the proposal can be amended as necessary and the study results are most beneficial to the District and the communities in the watershed.

Please give me a call so we can decide how to proceed.

Thank you!

Dan Bare, P.E.
Sr. Civil Engineer
Colorado Springs Engineering
Stormwater

ph 719.385.5037

PUEBLO COUNTY
DEPARTMENT OF PLANNING AND DEVELOPMENT

January 14, 2013

Colorado Springs Utilities
Mr. Mark Pifher, SDS Permitting and Compliance Manager
121 South Tejon Street, Third Floor
P.O. Box 1103, Mail Code 930
Colorado Springs, CO 80947-0930

Re: Condition 6 of SDS 1041 Permit-- Monetary Mitigation for Fountain Creek Impacts

Dear Mr. Pifher:

Condition 6 of Pueblo County Resolution No. P&D 09-22, which approved 1041 Permit No. 2008-002 for the Southern Delivery System Project, requires the Applicant to pay $50 million to the Fountain Creek Watershed Flood Control and Greenway District (the "District") for mitigation of SDS impacts to Fountain Creek in Pueblo County. The last paragraph of Condition 6 reads as follows:

"In the event completion of the SDS Project is delayed beyond 42 months after the effective date of the permit because of an affirmative decision made by Applicant, then the payments to be made by the Applicant pursuant to this paragraph shall begin to be made on such date, without regard to project construction status, or such payments shall be subject to annual indexing commencing 42 months after the effective date of the permit, to increase the amount of such payments as required to preserve their present values, using the Colorado Front Range Producer Price Index, but not to exceed a maximum annual increase of 3.5%."

The effective date of the SDS 1041 Permit was April 21, 2009 by signature and recordation of Resolution No. P&D 09-22. 42 months after the effective date was October 21, 2012. On July 22, 2009, the Utilities Board, comprised of members of the Colorado Springs' City Council, voted to postpone completion of the SDS Project four years from its original completion date of 2012 to at least 2016. As a result of this affirmative decision to postpone the completion of the Project, the payments on the balance of $49,700,000 were to have begun to be made on October 21, 2012, or such remaining funds would be subject to annual indexing commencing on such date to increase the amount of such payments as required to preserve their present values at the rate and in the manner set forth in Condition 6.

Because no installment payment pursuant to Condition 6 was made to the District on October 21, 2012, it is our determination that that annual indexing on the payments began as of October 21, 2012. You may recall that we discussed this determination with you and other CSU

representatives at our meeting on November 20, 2012. Please acknowledge promptly in writing Applicant's concurrence or disagreement with this determination.

Thank you for your attention in this matter. Please do not hesitate to contact this office if you require further information or have any questions in this matter.

Sincerely,

Joan Armstrong
Director

c: Board of County Commissioners
Gary Raso, Special Assistant County Attorney
Raymond L. Petros Jr., Esq., Petros and White, LLC
Robert C. Schmidt II, PE, County Engineer/Director of Public Works
David Benbow, General Services Engineer, Department of Engineering and Public Works
Larry Small, Executive Director Fountain Creek Watershed Flood Control and Greenway District
1041 Permit No. 2008-002 File

Colorado Springs Utilities
It's how we're all connected

August 14, 2013

Board of Directors
Lower Arkansas Valley Water Conservancy District
801 Swink Avenue
Rocky Ford. CO 81067

RE: Pueblo Chieftain Water Quality Article

Dear LAVWCD Board of Directors:

Colorado Springs Utilities (Springs Utilities) read with interest the Pueblo Chieftain July 18, 2013 story regarding flow, sediment and *E. coli* data for Fountain Creek. It is our understanding that the conclusions contained in the story were drawn from an analysis of data found in the 2012 MS4 (stormwater) permit report filed by the City of Colorado Springs with the Colorado Department of Public Health and Environment (CDPHE). We have reviewed the MS4 report and plotted the data found therein as well as any additional relevant data we could locate, and have been unable to replicate the numbers reported in the newspaper story. We have requested the analysis that led to the conclusions in the story but have not received it at this time. Based on our analysis, we do not believe the data in the report supports any correlation between an increase in flows and/or pollutant concentrations in Fountain Creek and the dissolution of the Colorado Springs Stormwater Enterprise (SWENT) in 2010.

We would like to share our analysis with you and hope to begin a dialogue that will allow us to reach a shared understanding of what the raw data does, and does not, tell us, and what additional work, if any, may further inform the situation.

Using data from the USGS continuous recording stations along Fountain Creek, we found no increase in average or peak flows when comparing 2009 flows to 2012 flows, i.e., SWENT and post-SWENT years, as referenced in the Chieftain story. This is depicted in the three attached charts (Appendices 1-3), which, in fact, show a slight downward trend in average and peak flows.

Obviously, there will be a varying number of "peak days" recorded in any given year. This is simply based upon the random occurrence of storm events. However, Springs Utilities could not locate any evidence upon which a conclusion can be reached that a storm event in 2009 (during SWENT) of a given magnitude produced a significantly different flow than a comparable event in 2012 (post-SWENT) as a result of the absence of detention facilities that "may" have been built if SWENT had been in existence. Obviously, making such a comparison on a storm- by- storm basis is fraught with peril given the variable nature of Front Range summer "monsoon" events where isolated storm cells can drop significant precipitation at very specific locations that do not necessarily reflect the actual point of flow measurement.

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For example, a significant rainfall event in August of 2008 (1.48") resulted in a sustained peak flow at Security of approximately 6000 cfs, while only about one-half of that flow level was recorded at the Pueblo gauge. However, a single, short duration storm event in July 2010 of approximately 1.2" resulted in an instantaneous peak flow of almost 8000cfs at Security, but a peak of about only 1550 cfs at Pueblo. This would indicate that a number of factors are at work, including exactly where the storm event is centered, the intensity and duration of the storm, and even whether water rights are being exercised in the same manner during the storm occurrences.

Relative to *E. coli* densities, Springs Utilities has graphed the available data for the 2008-2012 period, and it demonstrates, if anything, a slight downward trend at the Security gauge during the summer months of these years (Appendix 4). The graphs also demonstrate that *E. coli* densities are not well correlated with flow levels (Appendices 5-6, Fountain Creek at Highway 50 and Fountain Creek at Pinon). Naturally, many factors may influence *E. coli* densities in a particular stream reach, including land use activities unrelated to a stormwater regulatory program, and the presence of waterfowl and other bird species. That said, point sources, including Springs Utilities' wastewater reclamation facilities, must always be prepared to meet their E. coli permit effluent limitations.

Drawing any conclusions from the sediment data is even more complex. The 2007-2012 time series at the Security gauge (Appendix 7) would appear to show a small upward trend beginning in 2010. However, upon closer examination, this simply reflects the fact that there were higher peak events in 2010-2012, i.e., more intense storms, which naturally move more sediment. In fact, when the 2007-2012 sediment data are plotted against flow (Appendices 8 and 9), the 2010-2012 data are actually concentrated below the approximate trend line for the 2007-2009 data. That is to say, for the 2010-2012 period, there is a lower sediment concentration associated with a given flow rate when compared to the 2007-2009 data.

The majority of the above observations are based on data collected at the Security gauge, which is the farthest downstream gauge used in the MS4 report. However, it may be valuable to examine more closely the "Pueblo" USGS monitoring records, as these may be of greater direct interest to the Pueblo area and downstream communities. Unfortunately, a preliminary analysis of this site by Springs Utilities revealed that sediment and *E. coli* measurements were not necessarily taken at the same frequency or on the same dates as they were at the Security gauge. This makes it difficult to draw any conclusions.

The observations above should be considered in the context of the soon to be released USGS "Fountain Creek Peak Flow and Sediment Study," which was funded by the SDS participants. Though it is estimated that the final version of the study will not to be available until this December, the USGS has presented preliminary results to the Fountain Creek Watershed Flood Control and Greenway District (FCWFCGD). Representatives of Springs Utilities were present for the presentation. As noted in the USGS presentation, the study objective was "to assess the effectiveness of various management strategies to attenuate storm flows and to control the erosional and depositional effects of sediment transport." The USGS developed a fairly complex model encompassing the Fountain Creek basin and ran thirteen (13) separate "scenarios" in which varying numbers of detention facilities were constructed in an effort to reduce peak flows and sediment transport "in Pueblo". Scenario #1 had seven detention facilities (3,520 a/f total), all in El Paso County, while scenario #8 had forty-four detention facilities (30,500 a/f total), six of which were in Pueblo County. Scenario #12 had only ten detention facilities (13,250 a/f), but six of the ten were within Pueblo County. What is most telling and interesting relative to potential future

planning, is that the modeling indicates that the FCWFCGD could construct as many as thirty-four facilities in El Paso County and not have the type of significant effect on peak flows (24.9% reduction) and sediment (8.6% reduction) that the USGS was attempting to identify. Yet, with scenario #12 and the ten facilities, where the majority of facilities are constructed in Pueblo County, there was a significant reduction in both peak flows (47.7%) and sediment loading (62.1%).

The above USGS modeling effort further supports the conclusion that no valid correlation can be drawn between any increase in flows or sediment loading, even if such increases were recorded, and the existence or non-existence of SWENT during the years referenced in the Chieftain story. That is to say, while local infrastructure investments within Colorado Springs outside the context of any permit requirements may have benefited Colorado Springs' residents, the few actual detention facilities that "may" have been constructed by the Enterprise in those three years (2010-2012) would have had no significant impact on flows or sediment loads in Pueblo or below Pueblo. However, the preliminary USGS results do indicate that a dialogue over the future construction of detention facilities within Pueblo County, under the auspices of the FCWFCGD, is a concept that merits future investigation.

Springs Utilities would like to reiterate that it takes stormwater control and water quality within the Fountain Creek basin very seriously, as the basin represents one of Springs Utilities' water supply sources and a community amenity. While the Pueblo County 1041 permit for the Southern Delivery System does not require any set monetary amount of stormwater control investments or the construction of any identified list of infrastructure projects, the SDS participants must ensure that once the SDS project is operational there must be in place "controls and other regulations intended to ensure that Fountain Creek peak flows resulting from new development served by the SDS project within the Fountain Creek basin are no greater than existing conditions." Springs Utilities and its partners shall meet that commitment.

Finally, Springs Utilities has been an active participant in the formation of the Arkansas Fountain Coalition for Urban River Evaluation (AF Cure), a consortium of local entities, including the City of Pueblo, dedicated to water quality monitoring and water quality improvement in the Fountain Creek watershed. Springs Utilities has also indicated to the USGS its interest in funding, along with other interested parties, "post-fire/post storm event" water quality monitoring in order to evaluate the impacts of the Waldo Canyon and Black Forest fires. This is in addition to the continuation of the water quality monitoring activities established under the 1041 permit.

Springs Utilities hopes that this material proves of benefit to the Lower District in evaluating the stormwater/water quality/water quantity nexus. Springs Utilities would be glad to attend the District's September Board meeting and provide both any further explanation of the data we have examined, and an update on local Stormwater Steering Committee activities. In addition, Springs Utilities staff would be available to meet with any of the District's water quality consultants in the interim should you believe that would be useful.

Thank you for your attention to the matter.

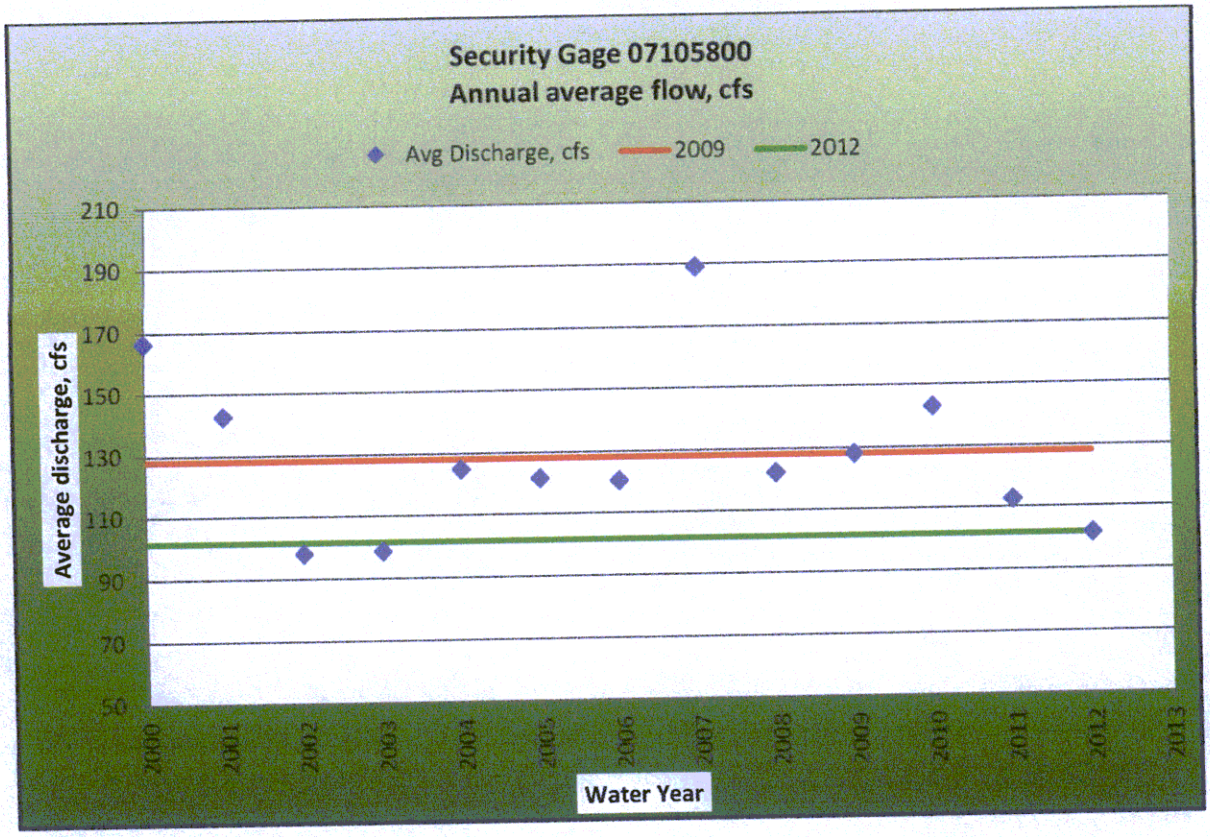
Sincerely,

Mark Pifher
SDS Permitting Manager
Colorado Springs Utilities

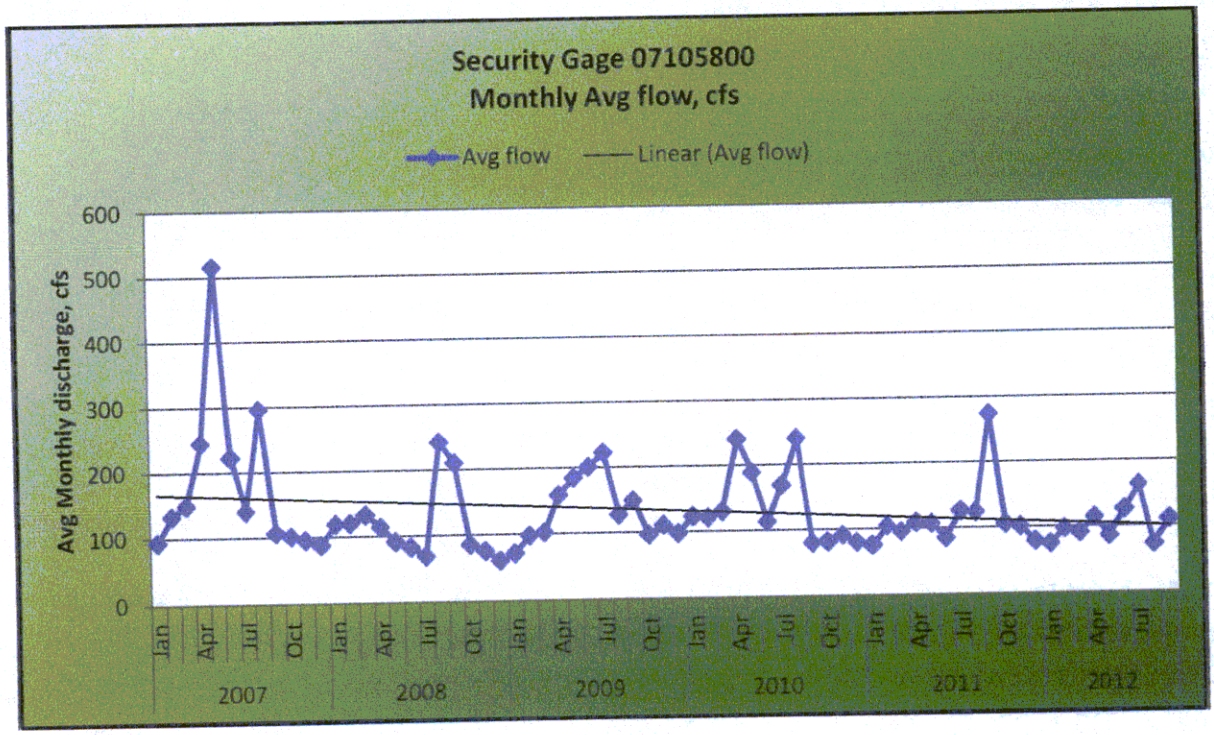
Attachments: Appendices 1 through 9

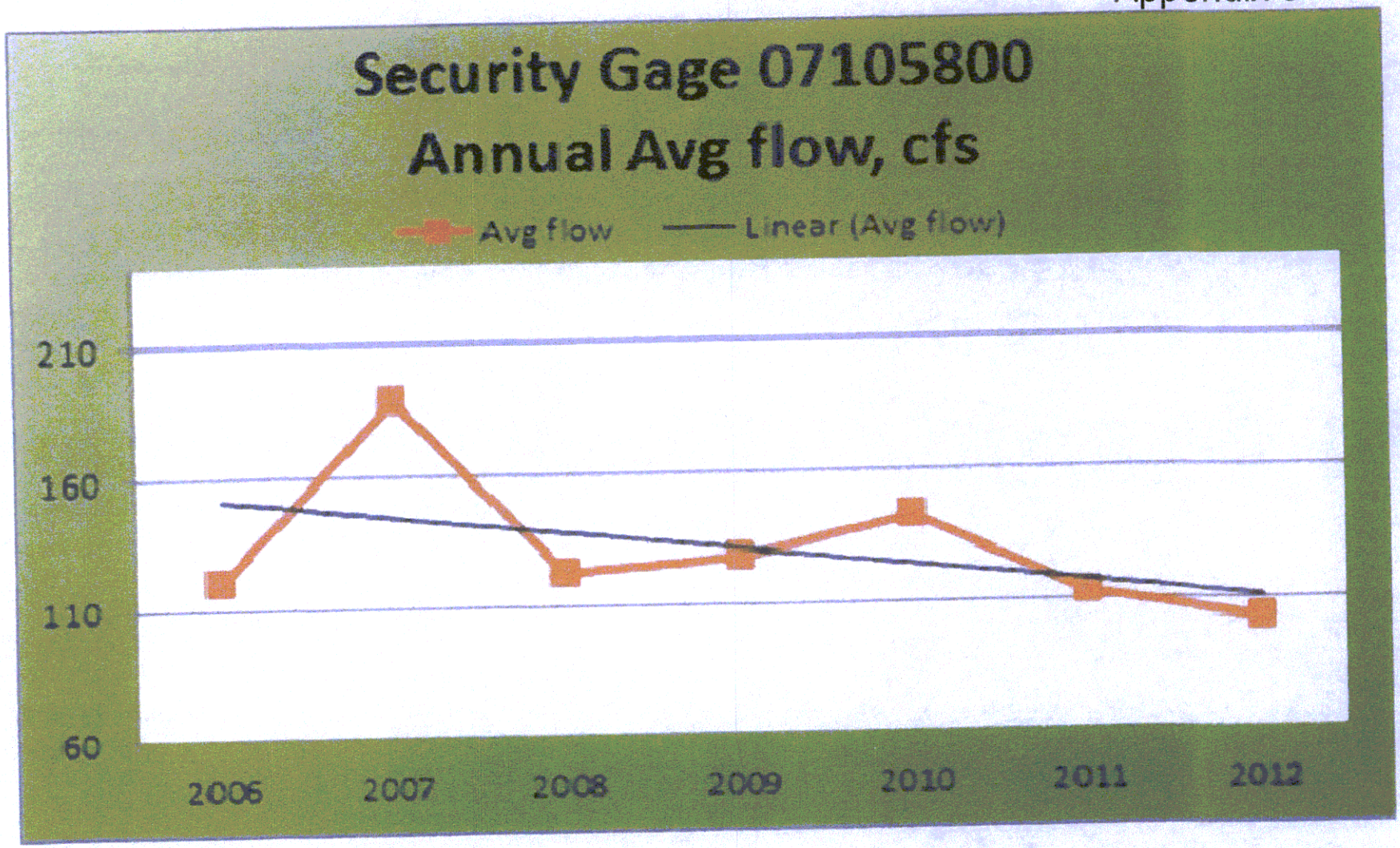
cc: Jay Winner, Executive Director LAVWCD
Peter Nichols, Attorney

Appendix 1

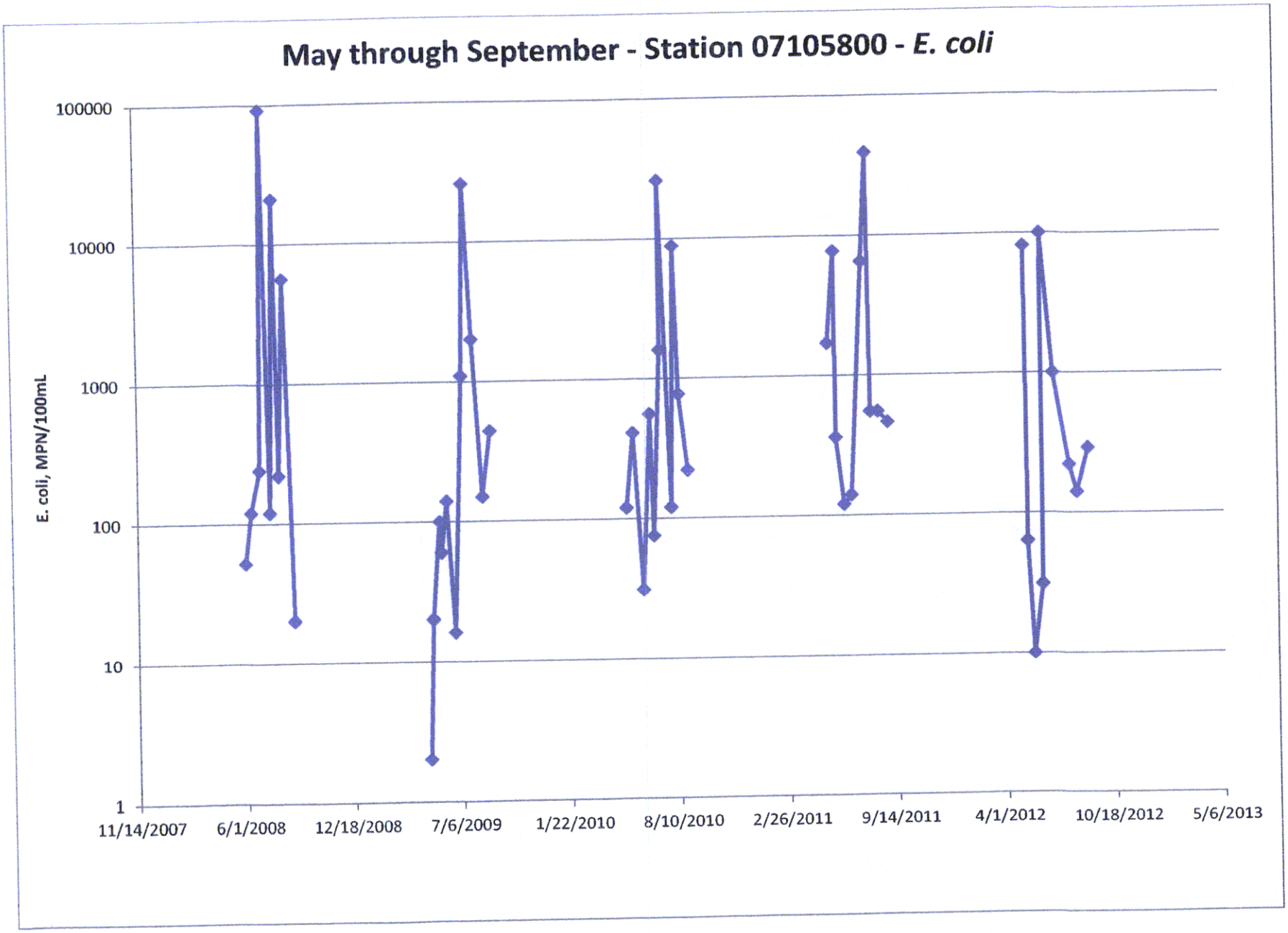


Appendix 2



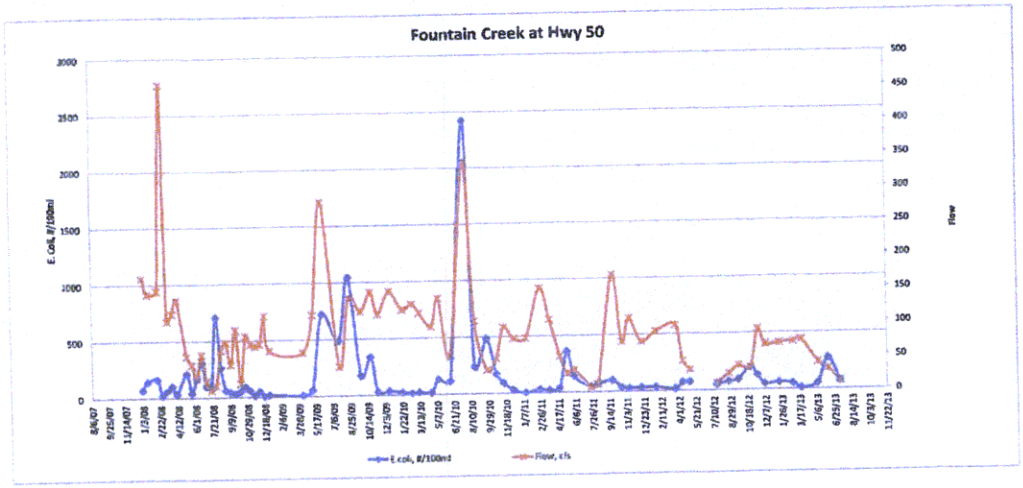

Security Gage 07105800
Annual Avg flow, cfs
Avg flow
Linear (Avg flow)
210
160
110
60
2006
2007
2008
2009
2010
2011
2012

Appendix 4


May through September - Station 07105800 - E. coli
E. coli, MPN/100mL
100000
10000
1000
100
10
1
11/14/2007
6/1/2008
12/18/2008
7/6/2009
1/22/2010
8/10/2010
2/26/2011
9/14/2011
4/1/2012
10/18/2012
5/6/2013

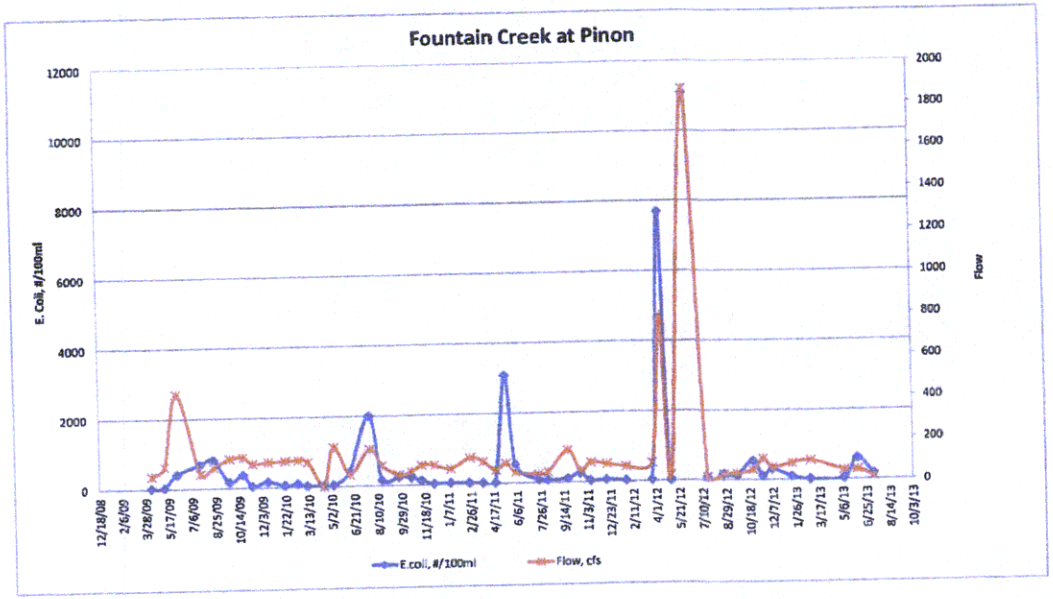
Appendix 5

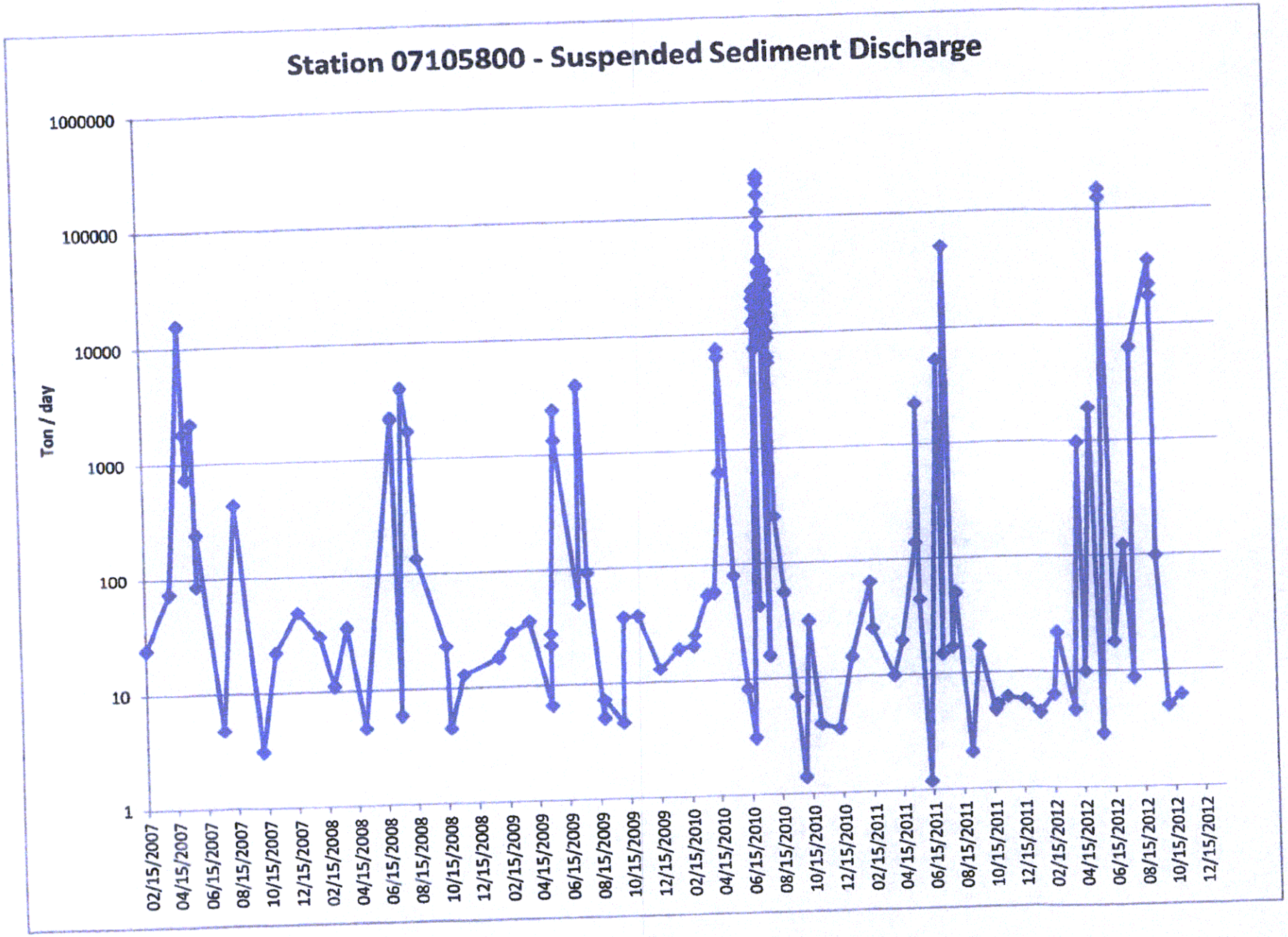
Sample No	Description	Date Sampled	E. Coli, Colilert, #/100 ml	Flow, cfs	Method
1033-08	Fountain Creek at Hwy 50	1/2/08	67.7	177	9223 B
1051-08	Fountain Creek at Hwy 50	1/16/08	142	153	9223 B
1098-08	Fountain Creek at Hwy 50	2/13/08	161	158	9223 B
1119-08	Fountain Creek at Hwy 50	2/27/08	18.3	462	9223 B
1138-08	Fountain Creek at Hwy 50	3/12/08	60.2	113	9223 B
1158-08	Fountain Creek at Hwy 50	3/26/08	101	124	9223 B
1176-08	Fountain Creek at Hwy 50	4/9/08	34.1	144	9223 B
1216-08	Fountain Creek at Hwy 50	5/7/08	214	61	9223 B
1233-08	Fountain Creek at Hwy 50	5/21/08	40.4	48	9223 B
1253-08	Fountain Creek at Hwy 50	6/4/08	172	28	9223 B
1270-08	Fountain Creek at Hwy 50	6/18/08	308	65	9223 B
1290-08	Fountain Creek at Hwy 50	7/2/08	101	23	9223 B
1315-08	Fountain Creek at Hwy 50	7/16/08	86	9.8	9223 B
1332-08	Fountain Creek at Hwy 50	7/30/08	712	17	9223 B
1353-08	Fountain Creek at Hwy 50	8/13/08	263	70	9223 B
1370-08	Fountain Creek at Hwy 50	8/27/08	63.1	81	9223 B
1391-08	Fountain Creek at Hwy 50	9/10/08	45	48	9223 B
1412-08	Fountain Creek at Hwy 50	9/24/08	29.2	99	9223 B
1431-08	Fountain Creek at Hwy 50	10/8/08	51.2	20	9223 B
1450-08	Fountain Creek at Hwy 50	10/22/08	88.2	90	9223 B
1468-08	Fountain Creek at Hwy 50	11/5/08	57.3	78	9223 B
1489-08	Fountain Creek at Hwy 50	11/19/08	13.4	75	9223 B
1509-08	Fountain Creek at Hwy 50	12/3/08	49.5	78	9223 B
1533-08	Fountain Creek at Hwy 50	12/17/08	5.2	120	9223 B
1550-08	Fountain Creek at Hwy 50	12/31/08	14.6	88	9223 B
1684-05	Fountain Creek at Hwy 50	4/9/09	8.4	65	9223 B
1725-05	Fountain Creek at HWY 50	5/7/09	53.7	120	9223 B
1762-05	Fountain Creek at Hwy 50	6/4/09	727	286	9223 B
1822-05	Fountain Creek at HWY 50	7/13/09	488	43	9223 B
1863-05	Fountain Creek at HWY 50	8/20/09	1050	144	9223 B
1907-05	Fountain Creek at Hwy 50	9/24/09	172	124	9223 B
1947-05	Fountain Creek at Hwy 50	10/22/09	345	152	9223 B
1972-05	Fountain Creek at HWY 50	11/12/09	28.8	120	9223 B
2015-05	Fountain Creek at HWY 50	12/15/09	37.9	153	9223 B
2069-05	Fountain Creek at HWY 50	1/21/10	21.6	126	9223 B
2104-05	Fountain Creek at HWY 50	2/18/10	13.4	134	9223 B
2131-05	Fountain Creek at Hwy 50	3/11/10	23.6	121	9223 B
2173-05	Fountain Creek at Hwy 50	4/15/10	16.9	100	9223 B
2201-05	Fountain Creek at HWY 50	5/6/10	133	142	9223 B
2248-05	Fountain Creek at Hwy 50	6/10/10	115	58	9223 B
2303-05	Fountain Creek at HWY 50	7/22/10	2420	343	9223 B
2341-05	Fountain Creek at HWY 50	8/19/10	238	108	9223 B
2382-05	Fountain Creek at Hwy 50	9/23/10	488	35	9223 B
2418-05	Fountain Creek at Hwy 50	10/21/10	172	52	9223 B
2465-05	Fountain Creek at HWY 50	11/11/10	90.8	98	9223 B
2500-05	Fountain Creek at HWY 50	12/9/10	29.5	81	9223 B
2546-05	Fountain Creek at HWY 50	1/13/11	2	81	9223 B
2604-05	Fountain Creek at HWY 50	2/24/11	27.5	134	9223 B
2645-05	Fountain Creek at Hwy 50	3/24/11	20.3	108	9223 B
2683-05	Fountain Creek at Hwy 50	4/21/11	36.4	54	9223 B
2709-05	Fountain Creek at HWY 50	5/12/11	365	28	9223 B
2738-05	Fountain Creek at Hwy 50	6/2/11	140	33	9223 B
2802-05	Fountain Creek at HWY 50	7/21/11	48.7	7	9223 B
2827-05	Fountain Creek at HWY 50	8/11/11	67.7	11	9223 B
2868-05	Fountain Creek at Hwy 50	9/22/11	95.9	172	9223 B
2921-05	Fountain Creek at Hwy 50	10/19/11	33.6	73	9223 B
2947-05	Fountain Creek at HWY 50	11/10/11	26.9	108	9223 B
2993-05	Fountain Creek at HWY 50	12/15/11	28.8	73	9223 B
3026-05	Fountain Creek at HWY 50	1/16/12	32.7	88	9223 B
3119-05	Fountain Creek at Hwy 50	3/22/12	14.5	97	9223 B
3145-05	Fountain Creek at Hwy 50	4/12/12	73.2	44	9223 B
3169-05	Fountain Creek at HWY 50	5/3/12	71.7	31	9223 B
3214-05	Fountain Creek at Hwy 50	6/7/12	14400	914	9223 B
3270-05	Fountain Creek at HWY 50	7/19/12	47.1	10	9223 B
3312-05	Fountain Creek at HWY 50	8/23/12	73.8	24	9223 B
3348-05	Fountain Creek at Hwy 50	9/20/12	90.9	36	9223 B
3390-05	Fountain Creek at Hwy 50	10/25/12	196	33	9223 B
3417-05	Fountain Creek at HWY 50	11/15/12	125	89	9223 B
3445-05	Fountain Creek at HWY 50	12/5/12	48.7	67	9223 B
3499-05	Fountain Creek at HWY 50	1/17/13	60.5	69	9223 B
3550-05	Fountain Creek at HWY 50	2/26/13	49.5	71	9223 B
3578-05	Fountain Creek at Hwy 50	3/21/13	9.8	73	9223 B
3639-05	Fountain Creek at HWY 50	5/8/13	51.2	40	9223 B
3672-04	Fountain Creek at HWY 50	6/6/13	276	30	9223 B
3718-04	Fountain Creek at HWY 50	7/10/13	69.5	12	9223 B



Appendix 6

Sample No.	Description	Date Sampled	E. Coli, Colilert, #/100 ml	Flow, cfs	Method
1684-06	Fountain Creek at Pinon Bridge	4/9/09	18.5	61	9223 B
1725-06	Fountain Creek at Pinon Bridge	5/7/09	30.5	106	9223 B
1762-06	Fountain Creek at Pinon Bridge	6/4/09	411	450	9223 B
1822-06	Fountain Creek at Pinon Bridge	7/23/09	687	69	9223 B
1863-06	Fountain Creek at Pinon Bridge	8/20/09	816	100	9223 B
1907-06	Fountain Creek at Pinon Bridge	9/24/09	172	140	9223 B
1947-06	Fountain Creek at Pinon Bridge	10/22/09	370	145	9223 B
1972-06	Fountain Creek at Pinon Bridge	11/12/09	50.4	115	9223 B
2016-06	Fountain Creek at Pinon Bridge	12/15/09	172	120	9223 B
2069-06	Fountain Creek at Pinon Bridge	1/21/10	52.1	125	9223 B
2104-06	Fountain Creek at Pinon Bridge	2/18/10	91	127	9223 B
2131-06	Fountain Creek at Pinon Bridge	3/11/10	29.8	119	9223 B
2177-06	Fountain Creek at Pinon Bridge	4/15/10	37.3	2.2	9223 B
2201-06	Fountain Creek at Pinon Bridge	5/6/10	38.4	187	9223 B
2248-06	Fountain Creek at Pinon Bridge	6/10/10	411	55	9223 B
2303-06	Fountain Creek at Pinon Bridge	7/22/10	1990	174	9223 B
2341-06	Fountain Creek at Pinon Bridge	8/19/10	162	96	9223 B
2382-06	Fountain Creek at Pinon Bridge	9/23/10	238	50	9223 B
2418-06	Fountain Creek at Pinon Bridge	10/21/10	219	64	9223 B
2465-06	Fountain Creek at Pinon Bridge	11/11/10	127	94	9223 B
2500-06	Fountain Creek at Pinon Bridge	12/9/10	26.2	94	9223 B
2546-06	Fountain Creek at Pinon Bridge	1/13/11	35.9	74	9223 B
2604-06	Fountain Creek at Pinon Bridge	2/24/11	31.8	125	9223 B
2645-06	Fountain Creek at Pinon Bridge	3/24/11	24.1	106	9223 B
2683-06	Fountain Creek at Pinon Bridge	4/21/11	26.2	63	9223 B
2709-06	Fountain Creek at Pinon Bridge	5/12/11	3080	96	9223 B
2738-06	Fountain Creek at Pinon Bridge	6/2/11	548	53	9223 B
2802-06	Fountain Creek at Pinon Bridge	7/21/11	93.3	41	9223 B
2827-06	Fountain Creek at Pinon Bridge	8/11/11	69.7	50	9223 B
2883-06	Fountain Creek at Pinon Bridge	9/22/11	105	153	9223 B
2921-06	Fountain Creek at Pinon Bridge	10/19/11	248	53	9223 B
2947-06	Fountain Creek at Pinon Bridge	11/10/11	35.9	94	9223 B
2993-06	Fountain Creek at Pinon Bridge	12/15/11	52	85	9223 B
3026-06	Fountain Creek at Pinon Bridge	1/26/12	26.2	72	9223 B
3119-06	Fountain Creek at Pinon Bridge	3/22/12	34.5	88	9223 B
3145-06	Fountain Creek at Pinon Bridge	4/12/12	7700	787	9223 B
3169-06	Fountain Creek at Pinon Bridge	5/3/12	16	29	9223 B
3214-06	Fountain Creek at Pinon Bridge	6/7/12	11100	1870	9223 B
3270-06	Fountain Creek at Pinon Bridge	7/19/12	79.4	15	9223 B
3312-06	Fountain Creek at Pinon Bridge	8/23/12	172	28	9223 B
3348-06	Fountain Creek at Pinon Bridge	9/20/12	119	30	9223 B
3390-06	Fountain Creek at Pinon Bridge	10/25/12	548	47	9223 B
3417-06	Fountain Creek at Pinon Bridge	11/15/12	101	101	9223 B
3445-06	Fountain Creek at Pinon Bridge	12/6/12	299	60	9223 B
3499-06	Fountain Creek at Pinon Bridge	1/17/13	98.8	79	9223 B
3550-06	Fountain Creek at Pinon Bridge	2/26/13	18.7	91	9223 B
3639-06	Fountain Creek at Pinon Bridge	5/8/13	38.4	44	9223 B
3677-01	Fountain Creek at Pinon Bridge	6/6/13	613	46	9223 B
3718-01	Fountain Creek at Pinon Bridge	7/10/13	162	15	9223 B




Station 07105800 - Suspended Sediment Discharge
Ton / day
1000000
100000
10000
1000
100
10
1
02/15/2007
04/15/2007
06/15/2007
08/15/2007
10/15/2007
12/15/2007
02/15/2008
04/15/2008
06/15/2008
08/15/2008
10/15/2008
12/15/2008
02/15/2009
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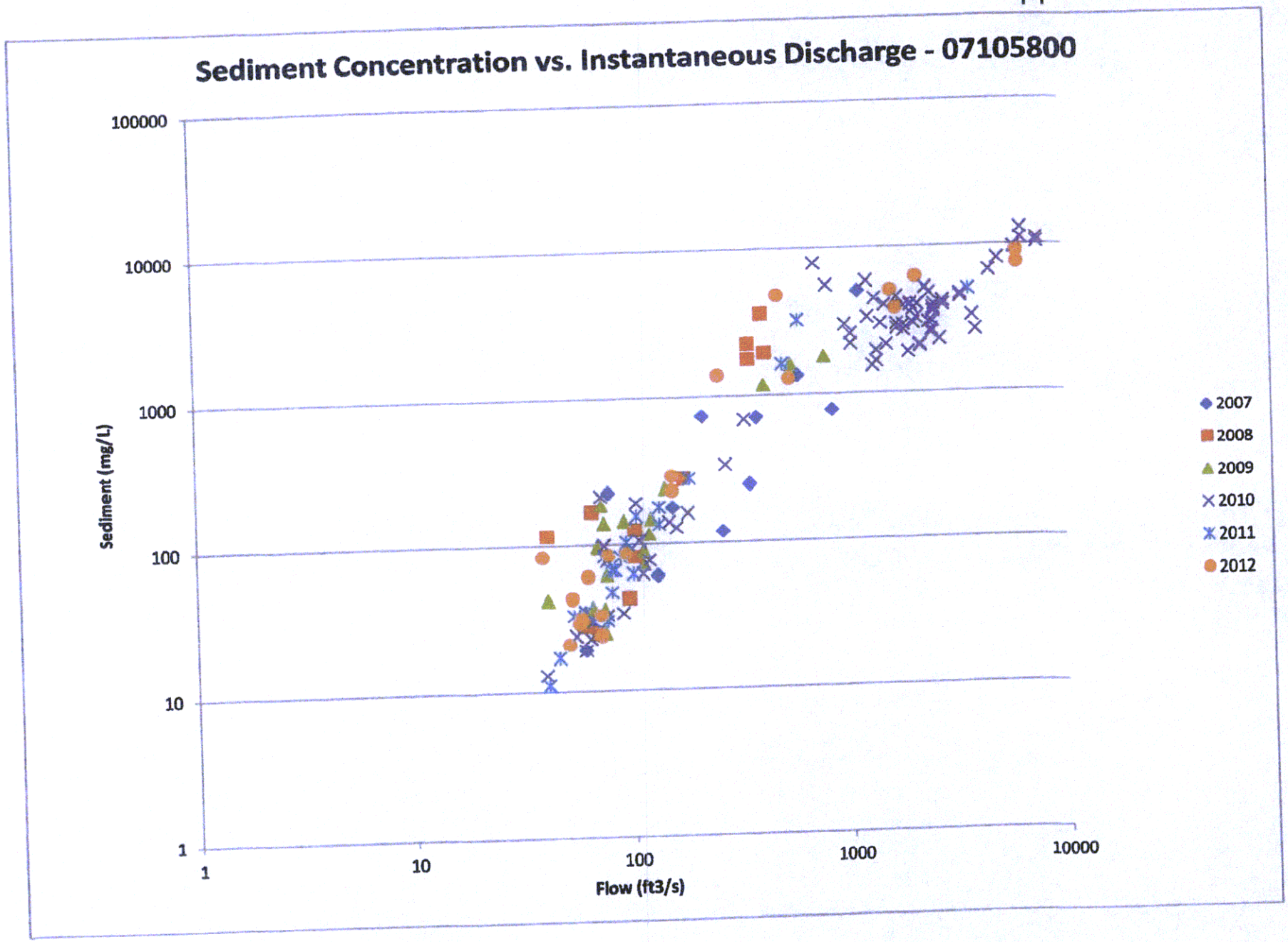
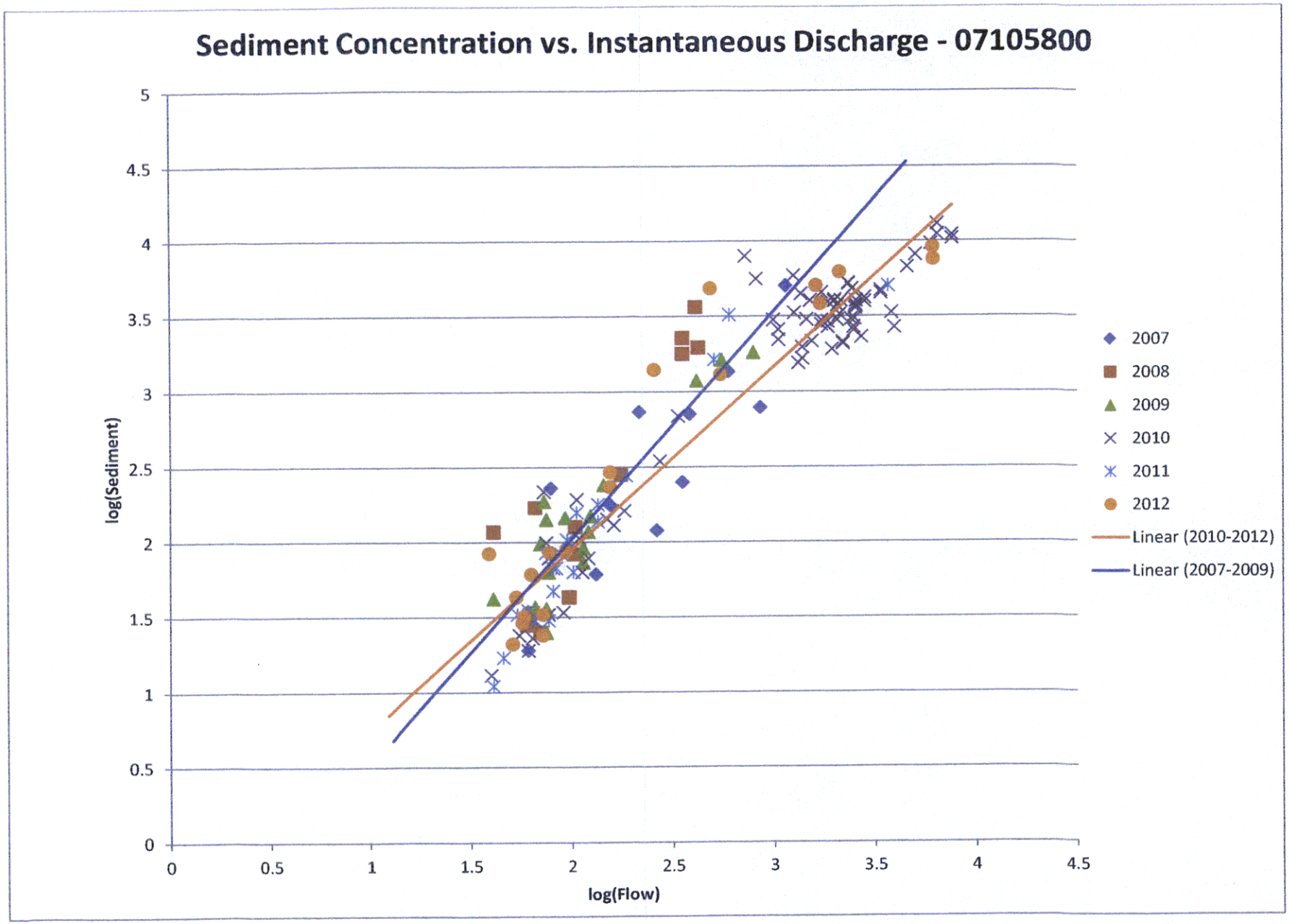

Sediment Concentration vs. Instantaneous Discharge - 07105800
100000
10000
1000
100
10
1
Sediment (mg/L)
1
10
100
1000
10000
Flow (ft3/s)
2007
2008
2009
2010
2011
2012


Sediment Concentration vs. Instantaneous Discharge - 07105800
log(Sediment)
log(Flow)
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
2007
2008
2009
2010
2011
2012
Linear (2010-2012)
Linear (2007-2009)

Colorado Springs Utilities
It's how we're all connected

October 31, 2013

Ms. Joan Armstrong
Director of Planning and Development
Pueblo County
229 W. 12th Street
Pueblo, CO 81003

Subject: Condition 6 - Monetary Mitigation for Fountain Creek Impacts, Southern Delivery System (SDS), 1041 Permit No. 2008-002

Dear Ms. Armstrong,

This letter is in response to both your January 14, 2013 letter requesting written acknowledgement that the annual indexing pursuant to Condition 6 of the 1041 permit began on October 21, 2012, and our subsequent conversations since that time on choosing an appropriate indexing calculation methodology that is consistent with the permit language.

The last paragraph of Condition 6 states as follows:

> "In the event completion of the SDS Project is delayed beyond 42 months after the effective date of the permit because of an affirmative decision made by Applicant, then the payments to be made by the Applicant pursuant to this paragraph shall begin to be made on such date, without regard to project construction status, or such payments shall be subject to annual indexing commencing 42 months after the effective date of the permit, to increase the amount of such payments as required to preserve their present values, using the Colorado Front Range Producer Price Index, but not to exceed a maximum annual increase of 3.5%"

Colorado Springs Utilities ("CSU") acknowledges that annual indexing of the $49,400,000 remaining balance of the monetary mitigation pursuant to Condition 6 began on October 21, 2012.

That said, however, CSU and its consultants, as well as County staff, have been unable to locate an index by the name listed in the permit ("Colorado Front Range Producer Price Index"). Hence, as recently indicated to you, we propose that the parties agree upon the use of the U.S. Department of Labor, Bureau of Labor Statistics "Producer Price Index for Finished Goods", as can be found at http://www.bls.gov/ppi/data.htm (select "Top Picks" under "Commodity Data including stage-of-processing indexes (Producer Price Index - PPI)" and then select "Finished goods - WPUSOP3000"). This national PPI represents the entire marketed output of finished goods from U.S. producers and would fulfill the stated intent of Condition 6, i.e., to preserve the present value of the monetary mitigation amount established in the 1041 permit.

121 South Tejon Street, Third Floor
P.O. Box 1103, Mail Code 930
Colorado Springs, CO 80947-0930

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http://www.csu.org

In addition to obtaining an agreed upon understanding of the actual indexing metric to be employed in performing the Condition 6 calculation, CSU also wants to ensure that both the Applicant and Pueblo County agree upon the actual calculation methodology to be followed. In that regard, Condition 6 provides that:

> "Payment shall be made as to the remaining forty-nine million seven hundred thousand ($49,700,000) as follows: nine million seven hundred thousand ($9,700,000) on January 15 of the year following completion and commencement of water deliveries through the SDS Pipeline from Pueblo Reservoir to Colorado Springs and in equal annual installments of ten million dollars ($10,000,000) on January 15 of each of the four years thereafter." [Note that an additional $300,000 was paid by CSU to the FCWFCGD, with the concurrence of Pueblo County, in 2009].

CSU believes that the following proposal represents an indexing calculation approach that honors the intent of this permit language. It has been prepared with the assistance of the Chief Financial Officer for Utilities and an independent outside economic consultant. A calculation summary can be found as attachment A hereto. In summary, the methodology would work as follows:

- As noted above, the parties have agreed that the 42-month date for commencing annual indexing as referenced in Condition 6 of the 1041 permit is October 21, 2012.

- Under one scenario, Condition 6 provides that if the SDS Pipeline is complete and water delivered to Colorado Springs on or before December 31, 2015, the initial payment would be due on January 15, 2016. Under this scenario there would be three "annual" twelve month indexing periods prior to the January 15, 2016 date, i.e., October 21, 2012 to October 21, 2015 (36 months total). The amount of the payment due on January 15, 2016, would thus reflect a net present value calculation for each of the three indexing periods: for administrative convenience, the PPI annual rate of inflation corresponding most closely to the indexing period will used in the calculations, e.g., the published PPI for November 2012 and November 2013 will be used to calculate the net present value for the indexing period from October 21, 2012, to October 21, 2013.

    - For example, assuming that the PPI increased at a rate of 3.33% for each of the three annual periods, the amount owed would be calculated initially by multiplying $9.4M by 3.33%. The resulting product would be added to the base amount (resulting in approximately $9.713M) and that figure would then be multiplied again by 3.33% for the second annual period, with the resulting product added to the base amount and then increased a final time by the same 3.33%, resulting in a first payment in the approximate amount of $10.37M on January 15, 2016.
    - The next payment, due on January 15, 2017, was originally in the amount of $10M. This payment would now also be three years later in time than if the SDS Pipeline had been completed by October 21, 2012. Rather than being paid on January 15, 2014, it would be paid on January 15, 2017. Thus, the parties would look to the annual PPI changes from October 21, 2013 to October 21, 2016, using the November to November PPI numbers, for purposes of adjusting this payment. If, once again, the PPI increased by 3.33% for each of the three one-year periods, the January 15, 2017 payment would be approximately $11.03M.

  - The same three twelve-month adjustments, reflecting the annual PPI changes, would be made for each of the next three $10M payments, e.g., the adjustment for the January 15, 2018 payment would encompass the PPI changes for the three one-year periods from October 21, 2014 to October 21, 2017.

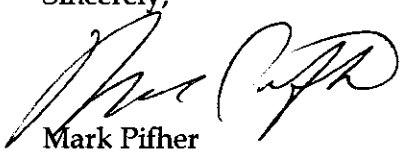
- Under a second scenario, if the SDS Pipeline was not completed and water was not delivered to Colorado Springs until some date in 2016, the first payment would be due on January 15, 2017. However, that payment would reflect four periods of PPI indexing, i.e., from October 21, 2012 to October 21, 2016. The amount of each of the remaining annual payments would be calculated following the same procedure outlined above, but each one would have four years of PPI indexing to maintain net present value.

- On or before December 31 of each year, commencing in the year before the first payment is due, CSU staff shall meet with Pueblo County staff for purposes of confirming the final PPIs for each of the November to November twelve month periods used in the calculation and reaching agreement upon the amount to be paid by CSU on or before January 15 of the following year utilizing the calculation methodology more fully described above. All documentation associated with such PPI determinations and subsequent calculations shall be retained by County staff as a record of the process followed in reaching the payment amount. Though such a situation is not anticipated, to the extent there is a "negative" PPI in any annual period utilized in the calculation, the parties have agreed that such annual period will be treated as zero, or "no change" for that annual period.

Though the payments under Condition 6 are not due for a number of years, it would be in our mutual interests to confirm our agreement upon the intended index and calculation methodology at this time. It is my understanding that the County Attorney's office will be preparing a Resolution for the Board of County Commissioners consideration which would reflect that confirmation.

Thank you for your assistance.

Sincerely,



Mark Pifher
SDS Permitting and Compliance Manager

cc:
John Fredell
Rick Griffith
Keith Riley

Colorado Springs Utilities

It's how we're all connected

May 1, 2014

Ms. Joan Armstrong
Director of Planning and Development
Pueblo County
229 W. 12th Street
Pueblo, CO 81003

Subject: Condition 6 – Monetary Mitigation for Fountain Creek Impacts, Southern Delivery System (SDS), 1041 Permit No. 2008-002

Dear Ms. Armstrong,

This letter is in response to both your January 14, 2013 letter requesting written acknowledgement that the annual indexing pursuant to Condition 6 of the 1041 permit began on October 21, 2012, and our subsequent conversations since that time on choosing an appropriate indexing calculation methodology that is consistent with the permit language.

The last paragraph of Condition 6 states as follows:

> "In the event completion of the SDS Project is delayed beyond 42 months after the effective date of the permit because of an affirmative decision made by Applicant, then the payments to be made by the Applicant pursuant to this paragraph shall begin to be made on such date, without regard to project construction status, or such payments shall be subject to annual indexing commencing 42 months after the effective date of the permit, to increase the amount of such payments as required to preserve their present values, using the Colorado Front Range Producer Price Index, but not to exceed a maximum annual increase of 3.5%"

Colorado Springs Utilities ("CSU") acknowledges that annual indexing of the $49,400,000 remaining balance of the monetary mitigation pursuant to Condition 6 began on October 21, 2012.

That said, however, CSU and its consultants, as well as Pueblo County staff, have been unable to locate an index by the name listed in the permit ("Colorado Front Range Producer Price Index"). Hence, as recently indicated to you, we propose that the parties agree upon the use of the U.S. Department of Labor, Bureau of Labor Statistics "Producer Price Index for Finished Goods", as can be found at http://www.bls.gov/ppi/data.htm (select "Top Picks" under "Commodity Data including stage-of-processing indexes (Producer Price Index - PPI)" and then select "Finished goods - WPUSOP3000"). This national PPI represents the entire marketed output of finished goods from U.S. producers and would fulfill the stated intent of Condition 6, i.e., to preserve the present value of the monetary mitigation amount established in the 1041 permit.

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P.O. Box 1103, Mail Code 930
Colorado Springs, CO 80947-0930

Phone 719.668.4800
Fax 719.668.8734
http://www.csu.org

In addition to obtaining an agreed upon understanding of the actual indexing metric to be employed in performing the Condition 6 calculation, CSU also wants to ensure that both the Applicant and Pueblo County agree upon the actual calculation methodology to be followed. In that regard, Condition 6 provides that:

> "Payment shall be made as to the remaining forty-nine million seven hundred thousand ($49,700,000) as follows: nine million seven hundred thousand ($9,700,000) on January 15 of the year following completion and commencement of water deliveries through the SDS Pipeline from Pueblo Reservoir to Colorado Springs and in equal annual installments of ten million dollars ($10,000,000) on January 15 of each of the four years thereafter." [Note that an additional $300,000 was paid by CSU to the FCWFCGD, with the concurrence of Pueblo County, in 2009].

CSU believes that the following proposal represents an indexing calculation approach that honors the intent of this permit language. It has been prepared with the assistance of the Chief Financial Officer for Utilities and an independent outside economic consultant. A calculation procedure that incorporates a hypothetical example can be found as Attachment "A" hereto. In summary, the methodology would work as follows:

- As noted above, the parties have agreed that the 42-month date for commencing annual indexing as referenced in Condition 6 of the 1041 permit is October 21, 2012.

- Under one scenario, Condition 6 provides that if the SDS Pipeline is complete and water delivered to Colorado Springs on or before December 31, 2015, the initial payment would be due on January 15, 2016[1]. Under this scenario there would be three "annual" twelve month indexing periods prior to the January 15, 2016 date, i.e., October 21, 2012 to October 21, 2015 (36 months total). The amount of the payment due on January 15, 2016, would thus reflect a net present value calculation for each of the three indexing periods: for administrative convenience, the PPI annual rate of inflation corresponding most closely to the indexing period will used in the calculations, e.g., the published PPI for November 2012 and November 2013 will be used to calculate the net present value for the indexing period from October 21, 2012, to October 21, 2013. A copy of the applicable published preliminary PPI tables to be utilized can be found as Attachment "B" hereto and is provided for illustrative purposes only. The "final" PPI tables, as referenced in Step 11 of Attachment "A", will also be employed. Copies of such tables shall be provided by CSU to the County as part of the confirmation process identified below.
    - For example, assuming that the PPI increased at a rate of 3.33% for each of the three annual periods, the amount owed would be calculated initially by multiplying $9.4M by 3.33%. The resulting product would be added to the base amount (resulting in approximately $9.713M) and that figure would then be multiplied again by 3.33% for the second annual period, with the resulting product added to the base amount and then increased a final time by the same 3.33%, resulting in a first payment in the approximate amount of $10.37M on January 15, 2016.
    - The next payment, due on January 15, 2017, was originally in the amount of $10M. This payment would now also be three years later in time than if the SDS Pipeline had been

[1] Each annual payment will be completed through two transactions. The principal due will be paid by January 15. The index-based payment will be paid within one month of the Bureau of Labor Statistics' publication of a final PPI for November, typically in March.

completed by October 21, 2012. Rather than being paid on January 15, 2014, it would be paid on January 15, 2017. Thus, the parties would look to the annual PPI changes from October 21, 2013 to October 21, 2016, using the November to November PPI numbers, for purposes of adjusting this payment. If, once again, the PPI increased by 3.33% for each of the three one-year periods, the January 15, 2017 payment would be approximately $11.03M.

- The same three twelve-month adjustments, reflecting the annual PPI changes, would be made for each of the next three $10M payments, e.g., the adjustment for the January 15, 2018 payment would encompass the PPI changes for the three one-year periods from October 21, 2014 to October 21, 2017.

- Under a second scenario, if the SDS Pipeline was not completed and water was not delivered to Colorado Springs until some date in 2016, the first payment would be due on January 15, 2017. However, that payment would reflect four periods of PPI indexing, i.e., from October 21, 2012 to October 21, 2016. The amount of each of the remaining annual payments would be calculated following the same procedure outlined above, but each one would have four years of PPI indexing to maintain net present value.

- Within thirty (30) days of the adoption of the Board's Resolution as referenced below, and on or before December 31 of each year thereafter, CSU staff shall meet with Pueblo County staff for purposes of confirming the calculation and reaching agreement upon the principal amount to be paid by CSU on or before January 15 of the following year utilizing the calculation methodology more fully described above and in Attachment "A". On or before March 31 of each year, CSU staff shall meet with Pueblo County staff for purposes of confirming the PPIs for each of the November to November twelve month periods used in the calculation and reaching agreement upon the index-based amount to be paid by CSU utilizing the calculation methodology more fully described above and in Attachment "A". A sample calculation which assumes a 3.33% annual PPI and no further advance of principal beyond the $600,000 paid to the FCWFCGD to date is provided as Attachment "C" hereto for illustrative purposes only. All documentation associated with such PPI determinations and subsequent calculations shall be retained by Pueblo County staff as a record of the process followed in reaching the payment amount.

- Though such a situation is not anticipated, to the extent there is a "negative" PPI in any annual period utilized in the calculation, the parties have agreed that such annual period will be treated as zero, or "no change" for that annual period.

Though the payments under Condition 6 are not due for a number of years, it would be in our mutual interests to confirm our agreement upon the intended index and calculation methodology at this time. It is my understanding that the Pueblo County Attorney's office will be preparing a separate Resolution for the Board of County Commissioners consideration which would reflect that confirmation.

Thank you for your assistance.

Sincerely,

Mark Pifher
SDS Permitting and Compliance Manager

Attachments: A (2 pages), B, and C

cc:
John Fredell
Rick Griffith
Keith Riley

Attachment A.

Procedure for Applying Annual Indexing to Monetary Mitigation Amounts under Condition No. 6

This procedure is for calculating annual indexing pursuant to Condition 6 of the 1041 permit. Annual indexing of the first planned mitigation payment began on October 21, 2012.

Line	Instruction	Input/Result
1	**Start Year for Annual Indexing Calculation.** Year for which this annual indexing calculation begins	
2	**End Year for Annual Indexing Calculation.** Year for which this annual indexing calculation ends	
3	**Producer Price Index (PPI) for Start of Indexing Calculation.** Published PPI value [(a)] for November of the year identified in Line 1	
4	**PPI for End of Indexing Calculation.** Published PPI value [(a)] for November of the year identified in Line 2	
5	**Annual PPI Value Change.** Subtract Line 3 from Line 4, enter -0- if Line 3 is more than Line 4	
6	**Annual PPI Percent Change.** Divide Line 4 by Line 3 and multiply by 100, enter -0- if Line 5 is -0- [(b)], enter 3.5 if calculated value is greater than 3.5 [(c)]	
7	**Maximum Amount to be Indexed.** Annual payment identified in Condition No. 6, including any unpaid annual indexing for years prior to the year identified in Line 1	
8	**Annual Advance Payment Amount (if any).** Total of advance payments made between October of the year in Line 1 and October of the year in Line 2	
9	**Current Amount to be Indexed (principal and prior years' indexing).** Subtract Line 8 from Line 7	
10	**Annual Index-based Amount.** Multiply Line 9 by Line 6 and divide by 100, enter -0- if Line 4 is -0-	
11	**Total Annual Payment Amount with Indexing.** Add Line 9 and Line 10. This is the total annual payment if the amount identified in Line 9 is paid by January 15 of the year following the year identified in Line 2 and the amount identified in Line 10 is paid within one month of U.S. Bureau of Labor Statistics' publication of a final PPI [(d)] for use in Line 4. If these amounts are not paid, repeat the steps in Lines 1 through 10 using information for the next annual indexing period	

Notes:

(a) Data Source: U.S. Department of Labor, Bureau of Labor Statistics "Producer Price Index for Finished Goods", as can be found at http://www.bls.gov/ppi/data.htm (select "Top Picks" under "Commodity Data including stage-of-processing indexes (Producer Price Index - PPI)" and then select "Finished goods - WPUSOP3000").

(b) Negative annual percentage change is considered 0% by mutual agreement of Pueblo County and Colorado Springs Utilities

(c) Annual percentage increase is capped at 3.5% by Condition No. 6

(d) U.S Department of Labor, Bureau of Labor Statistics considers monthly PPI values to be preliminary and subject to revision for four months after original publication.

Attachment A.

Procedure for Applying Annual Indexing to Monetary Mitigation Amounts under Condition No. 6

This procedure is for calculating annual indexing pursuant to Condition 6 of the 1041 permit. Annual indexing of the first planned mitigation payment began on October 21, 2012.

Line	Instruction	Input/Result
1	**Start Year for Annual Indexing Calculation.** Year for which this annual indexing calculation begins	2012
2	**End Year for Annual Indexing Calculation.** Year for which this annual indexing calculation ends	2013
3	**Producer Price Index (PPI) for Start of Indexing Calculation.** Published PPI value [(a)] for November of the year identified in Line 1	194.5
4	**PPI for End of Indexing Calculation.** Published PPI value [(a)] for November of the year identified in Line 2	195.9
5	**Annual PPI Value Change.** Subtract Line 3 from Line 4, enter -0- if Line 3 is more than Line 4	1.4
6	**Annual PPI Percent Change.** Divide Line 4 by Line 3 and multiply by 100, enter -0- if Line 5 is -0- [(b)], enter 3.5 if calculated value is greater than 3.5 [(c)]	0.72
7	**Maximum Amount to be Indexed.** Annual payment identified in Condition No. 6, including any unpaid annual indexing for years prior to the year identified in Line 1	$ 9,400,000
8	**Annual Advance Payment Amount (if any).** Total of advance payments made between October of the year in Line 1 and October of the year in Line 2	$ -
9	**Current Amount to be Indexed (principal and prior years' indexing).** Subtract Line 8 from Line 7	$ 9,400,000
10	**Annual Index-based Amount.** Multiply Line 9 by Line 6 and divide by 100, enter -0- if Line 4 is -0-	$ 67,661
11	**Total Annual Payment Amount with Indexing.** Add Line 9 and Line 10. This is the total annual payment if the amount identified in Line 9 is paid by January 15 of the year following the year identified in Line 2 and the amount identified in Line 10 is paid within one month of U.S. Bureau of Labor Statistics' publication of a final PPI [(d)] for use in Line 4. If these amounts are not paid, repeat the steps in Lines 1 through 10 using information for the next annual indexing period	$ 9,467,661

Notes:

(a) Data Source: U.S. Department of Labor, Bureau of Labor Statistics "Producer Price Index for Finished Goods", as can be found at http://www.bls.gov/ppi/data.htm (select "Top Picks" under "Commodity Data including stage-of-processing indexes (Producer Price Index - PPI)" and then select "Finished goods - WPUSOP3000").

(b) Negative annual percentage change is considered 0% by mutual agreement of Pueblo County and Colorado Springs Utilities

(c) Annual percentage increase is capped at 3.5% by Condition No. 6

(d) U.S Department of Labor, Bureau of Labor Statistics considers monthly PPI values to be preliminary and subject to revision for four months after original publication.

Attachment B.

Producer Price Index for Finished Goods Data - January 2003 through December 2013

Source: http://www.bls.gov/ppi/data.htm, accessed February 3, 2014

Databases, Tables & Calculators by Subject

Change Output Options: From: 2003 To: 2013 GO

include graphs

More Formatting Options

Data extracted on: February 3, 2014 (2:39:46 PM)

Producer Price Index-Commodities

Series Id: WPUSOP3000
Not Seasonally Adjusted
Group: Stage of processing
Item: Finished goods
Base Date: 198200

Download: .xls

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2003	140.8	142.3	144.2	142.1	142.0	143.0	143.0	143.7	144.0	145.5	144.5	144.5	143.3
2004	145.4	145.3	146.3	147.3	148.9	148.7	148.5	148.5	148.7	152.0	151.7	150.6	148.5
2005	151.4	152.1	153.6	154.4	154.3	154.2	155.5	156.3	158.9	160.9	158.3	158.7	155.7
2006	159.9	158.0	159.1	160.7	161.2	161.8	161.7	162.3	160.3	158.9	159.8	160.5	160.4
2007	160.1	161.8	164.1	165.9	167.5	167.2	168.5	166.1	167.4	168.6	171.4	170.4	166.6
2008	172.0	172.3	175.1	176.5	179.8	182.4	185.1	182.2	182.2	177.4	172.0	168.8	177.1
2009	170.4	169.9	169.1	170.3	171.1	174.3	172.4	174.2	173.2	173.8	175.7(R)	176.0	172.5
2010	178.0	177.0	179.1	179.5	179.8	179.0	179.5	179.9	180.0	181.2	181.6	182.6	179.8
2011	184.4	186.6	189.1	191.4	192.5	191.4	192.2	191.7	192.6	191.8	191.7	191.1	190.5
2012	192.0	192.9	194.4	194.9	193.7	192.8	193.2	195.4	196.7	196.3	194.5	193.7	194.2
2013	194.8	196.3	196.6	195.9	196.8	197.2	197.2	197.9	197.3(P)	196.9(P)	195.9(P)	196.1(P)	196.6(P)

R : Revised
P : Preliminary. All indexes are subject to revision four months after original publication.

Progressive Installment Approach

Annual % Increase in Index	0.00%	3.3333333%	3.3333333%	3.3333333%	3.3333333%	3.3333333%	3.3333333%	3.3333333%
Annual Accrual Date	10/21/2012	10/21/2013	10/21/2014	10/21/2015	10/21/2016	10/21/2017	10/21/2018	10/21/2019
Payment Date	1/15/2013	1/15/2014	1/15/2015	1/15/2016	1/15/2017	1/15/2018	1/15/2019	1/15/2020
Payment 1	$ 9,400,000	$ 9,713,333	$ 10,037,111	$ 10,371,681	$ -	$ -	$ -	$ -
Payment 2	$ 10,000,000	$ 10,000,000	$ 10,333,333	$ 10,677,778	$ 11,033,704	$ -	$ -	$ -
Payment 3	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,333,333	$ 10,677,778	$ 11,033,704	$ -	$ -
Payment 4	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,333,333	$ 10,677,778	$ 11,033,704	$ -
Payment 5	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,333,333	$ 10,677,778	$ 11,033,704
REMAINING BALANCE	$ 49,400,000	$ 49,713,333	$ 50,370,444	$ 41,011,111	$ 31,011,111	$ 21,011,111	$ 10,677,778	$ -

TOTAL PAID **$ 54,506,496**

NET PRESENT VALUE CALCULATION

Payment 1	$ (9,400,000)	$ -	$ -	$ 10,371,681					npv @ 3.33% = $0
Payment 2		$ (10,000,000)	$ -	$ -	$ 11,033,704				npv @ 3.33% = $0
Payment 3			$ (10,000,000)	$ -	$ -	$ 11,033,704			npv @ 3.33% = $0
Payment 4				$ (10,000,000)	$ -	$ -	$ 11,033,704		npv @ 3.33% = $0
Payment 5					$ (10,000,000)	$ -	$ -	$ 11,033,704	npv @ 3.33% = $0

TOTAL **$0**

ATTACHMENT C