Appendix A: Comments and Responses for the Sept. 17 Draft GKM Conceptual Monitoring Plan

Date Received	Method of Receipt	Commenter	Comment	Response
10/8/2015	Comment mailbox	Arizona DEQ - Jason Sutter	AZ DEQ 1- Lake Powell- Please provide justification for only a single site being sampled within the lake. The potential for metals to migrate through the lake, either via the water column or sediment, exists so it seems prudent to sample further downstream of the San Juan River arm. Also, will a single surface sample be collected or will depth specific sampling occur? What is the frequency of sediment and fish tissue samples in relation to the water column sampling? Will they only be collected once with water column sampling occurring 4 times. Table 1 is not clear in the lake sampling frequency.	AZ DEQ 1- EPA believes that one sampling site at the interface of the San Juan River and Lake Powell will be sufficient for Objective A assessment. We appreciate the desire for additional sample collection sites and in response, EPA plans to provide Clean Water Act 106 funds to States and Tribes for expansion of monitoring under their own plans. Tribes and States may chose to expand the scope and frequency of monitoring and may chose to increase the number of sampling sites in Lake Powell to address their assessment questions.
10/8/2015	Comment mailbox	Arizona DEQ - Jason Sutter	AZ DEQ 2- Regarding Lake Powell: Table 1- Please clarify what metals sediment, benthos and fish samples will be analyzed for. Are they the same metals listed in footnote 1?	AZ DEQ 2 -Yes, sediments and biological tissues will be analyzed for the same metals identified in the footnotes. We will clarify that the footnote applies to sediment and tissues.
10/8/2015	Comment mailbox	Arizona DEQ - Jason Sutter	AZ DEQ 3- Table 1- It appears that stormwater sampling with only occur "at sites on the Animas in CO, Southern Ute, NM". If stormwater conditions will be remobilizing the contaminated sediment why limit the extent of sampling? Is there some justification that can be provided to support limiting the stormwater sampling to Colorado?	AZ DEQ 3- We will work with our State, tribal, and local partners to extend storm-event sampling in the San Juan which will require sampling crew coordination. Additionally, States and Tribes have the opportunity to consider additional biological monitoring in their Clean Water Act 106 funded plans.
10/8/2015	Comment mailbox	Arizona DEQ - Jason Sutter	AZ DEQ 4 - Section V. Assessment Summary- How often will data be analyzed, as collected or at the end of sampling?	AZ DEQ 4- EPA will analyze data as it becomes available after each of the sampling events and the lab analyses. However, September 2016 will be the major post-incident sampling and it is after that when a comprehensive post-incident assessment will be performed.
10/8/2015	Comment mailbox	Arizona DEQ - Jason Sutter	AZ DEQ 5- The first bullet under General Decision Rules appears to indicate that communication with stakeholders will only occur at the end of data collection. The communication should be ongoing as data are analyzed so that any issues can be addressed as they are recognized. How will EPA communicate results to stakeholders? Will data simply be posted on EPA's website or will a comprehensive report be developed and shared that includes data interpretation?	AZ DEQ 5- EPA intends to update stakeholders on a regular basis. A comprehensive post-incident assessment draft report is expected to be done by late 2016 or early 2017. Post incident data will become available through the Water Quality Portal (http://waterqualitydata.us) as they are analyzed and uploaded.
10/8/2015	Comment mailbox	Arizona Game and Fish - Marc Dalhberg	AZ G&F 1- The Study Questions in Objective A calls for an evaluation of only water and sediment quality trends. This evaluation should also include biological tissue for metal concentration. These samples should include fish, invertebrates and plankton that can be used to evaluate human health issues and to develop a broader perspective on potential impacts to the aquatic community. Information in Table 3 indicates that there are historical data for metals for both fish and benthic tissue that can be compared to post release analysis and trend development.	AZ G&F 1- The EPA agrees that biological data are important water quality indicators. We will use biological data (including tissue data) to support the determination of maintenance of historic conditions for any site in which historic data are adequate.
10/8/2015	Comment mailbox	Arizona Game and Fish - Marc Dalhberg	AZ G&F 2- The Assessment Objective B calls for the collection of biological samples at multiple locations. However, the Study Questions for Objective B only address an assessment of biological communities and do not address possible screening levels exceedances for fish consumption and aquatic life uses. There needs to be an evaluation of metals concentrations in biological samples to inform stakeholders of the environmental conditions across the watershed.	AZ G&F 2- The intent was for fish consumption and aquatic life uses to be considered under Objective A and B in the draft plan. However based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts that fall under Objective B of the Conceptual Monitoring Plan (CMP) as drafted. States/Tribes may develop and implement their own plans to include a broader array of analytes, sampling locations, and frequencies etc. EPA's final CMP will be modified to focus solely on Objective A as drafted and EPA and its contractors will plan to sample Objective A sites and parameters. That said, an evaluation of metals concentrations in macroinvertebrates and fish tissues across the watershed will be completed by EPA under Objective A in our final plan. We will make this clarification.
10/8/2015	Comment mailbox	Arizona Game and Fish - Marc Dalhberg	AZ G&F 3- Lake Powell is a critical resource to the Southwest and an evaluation of any chronic negative impacts associated with the Gold King Mine release should be thoroughly investigated. AGFD believes it is important to increase the number of sample locations from Lake Powell and therefore suggest that the following sites be included in the Monitoring Plan: • Lake Powell down lake from the Escalante Arm. The data from this site can be compared to the data collected from SJIN to determine if the San Juan Arm has been negatively impacted by both historic and recent mine discharges. • Lake Powell above Glen Canyon Dam The data generated from this site can be used to determine if mining impacts to the San Juan River extend to the lower portion of Lake Powell after mixing with the upper reaches of Lake Powell. • Lees Ferry below Glen Canyon Dam Glen Canyon Dam mixes the entire flow of the Colorado River watershed into Lees Ferry. Lees Ferry is a Blue Ribbon Trout Fishery and sits at the head of the Grand Canyon; this site should be properly evaluated and monitored for any potential long term chronic effects from mine discharges.	AZ G&F 3- EPA agrees that Lake Powell is an important waterbody. We appreciate the desire for additional sample collection sites and in response, EPA plans to provide Clean Water Act 106 funds to States and Tribes for expansion of monitoring under their own plans. States may chose to expand the scope and frequency of monitoring and may chose to increase the number of sampling sites in Lake Powell to address their own assessment questions.
10/8/2015	Comment mailbox	Arizona Game and Fish - Marc Dalhberg	AZ G&F 4- Regarding the suggested Lake Powell sites: AGFD believes it is important to have water, sediment and tissue samples collected from these additional locations and that all tissue sampling should extend past 2020.	AZ G&F 4- Several of the comments received on the first draft of the Conceptual Monitoring Plan (CMP) requested an expansion of scope for the plan through addition of media, analytes, study objectives, sampling locations, and study duration. In response, EPA has decided to provide Clean Water Act 106 funds to Tribes/States to develop and implement their own plans to supplement the monitoring to be carried out by EPA under this plan. In this way, EPA is providing the opportunity for the scope expansion through Tribal/State plans. EPA will focus the Agency's CMP on comparison of pre-post spill conditions in order to evaluate changes since the GKM Release Incident (duration of the monitoring will be determined after review/assessment of data collected over one year). Tribes and States may develop monitoring plans that address broader priories not captured by EPA's plans such as additional sampling of Lake Powell sites.
10/8/2015	Comment mailbox	Arizona Game and Fish - Marc Dalhberg	AZ G&F 5-The rationale for a one-year monitoring period to identify changes in metals concentrations in surface water and sediment should be explained. EPA proposes to end its monitoring at the end of one year if "pre-release water quality and sediment trends are similar to trends observed prior to [sic] [should read: since] the GKM release."	AZ G&F 5- EPA plans to monitor under Objective A for at least one-year. Based on data assessment under the decision rules provided in the plan, sampling locations may be identified that require further study/monitoring into the future. EPA's Office of Research and Development is undertaking a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with biological impacts related to the release. Once complete, this modeling effort may help identify locations in which future monitoring is warranted as well.
10/8/2015	Comment mailbox	Arizona Game and Fish - Marc Dalhberg	AZ G&F 6-Table 1 describes only three sediment collection events during this one-year period: fall 2015, March 2016, and fall 2016. Metals precipitated into sediments from the GKM release will continue to migrate downstream towards Lake Powell as flood events churn the sediments. Three discrete sediment sampling events are unlikely to capture contaminant fate and transport trends over time.	AZ G&F 6- In addition to these monitoring events, EPA's Office of Research and Development is undertaking a fate and transport modeling effort designed to predict water and sediment impacts throughout the watershed. This model along with sample collection will support our understanding of fate and transport in this system. Additionally, States and Tribes have the opportunity to consider additional monitoring in their Clean Water Act 106 funded plans.
10/8/2015	Comment mailbox	Arizona Game and Fish - Marc Dalhberg	AZ G&F 7- Table 1 describes a single benthos and fish tissue sampling event for fall 2016, which is insufficient to detect any impacts of the GKM release on macroinvertebrates, fish in their adult, juvenile and larval stages, or potential consumptive human health risks. Chronic exposure to heavy metals can impair macroinvertebrate communities, negatively impact fish embryonic development, fish tissues and organs. Metals can transfer through the food chain to other wildlife species that prey on macroinvertebrates and fish. The Department recommends macroinvertebrate monitoring and tissue sampling of benthos and fish at various life history stages for evidence of bioaccumulation over a longer timeframe.	AZ G&F 7- The EPA agrees that macroinvertebrate and other biological data are important water quality indicators. We are compiling historic data and will be collecting post-release data to assess against historic/pre-release data. We encourage all organizations with any type of data to enter that data into STORET/WQX and we are providing technical support to any States or Tribes that have not already uploaded any data. Biological data integrate the effect of many factors (e.g., climate, flow, habitat, water chemistry) beyond the metals that may be associated with the GKM release. Regarding the duration of biological monitoring, we strove to provide enough time for the biological communities to show effects while minimizing time and opportunity for confounding factors to also impact those communities. Because biological communities integrate many environmental factors, the further removed in time that monitoring occurs, the more confounded the data will be with respect to the GKM release and the more difficult the data will be to interpret. Hence, EPA will determine if additional biological monitoring is necessary subsequent to the fall 2016 event and as informed by EPA's Office of Research and Development's fate and transport modeling designed to predict potential biological impacts of the release. Additionally, States and Tribes have the opportunity to consider additional biological monitoring in their Clean Water Act 106 plans. This information in conjunction with the water and sediment data gathered under this monitoring plan will help identify areas requiring further study which will include additional biological monitoring.

10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 1 - Section II. Context for Conceptual Monitoring Plan and Data Uses Page 3, End of Paragraph 2 Historic biological datasets are "limited". In terms of just benthic macroinvertebrates, the Division has identified historic datasets collected by the Division, CO-River Watch, and the Animas River Stakeholder Group from the confluence of Cement Creek and Animas River to the CO-NM State line between 1992 and 2014. Considering the number of federal, State, local agencies, as well as local stakeholders involved in this basin over that term, it is difficult to fathom that more biological datasets cannot be pulled together, analyzed for method comparability, and then standardized for pre- and post-release assessments. Accordingly, the Division and its partners recommend that EPA add biological communities as a third "primary media" used to determine maintenance of historic conditions.	CDPHE 1- Thank you for data that you have already shared with us and we would appreciate any additional data that you may have. The EPA agrees that macroinvertebrate and other biological data are important water quality indicators. We will use biological data to support the determination of maintenance of historic conditions for any site in which historic data are adequate.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 2 - Page 3, Paragraph 3 The Division and its partners strongly agree with adding sites without robust datasets to the plan in order to complete the geographic distribution of sites so post-release benchmarking can proceed in areas previously not visited.	CDPHE 2- EPA plans on making an optimal selection of sites for Objective A assessment purposes and sampling those locations under the Conceptual Monitoring Plan. We appreciate the need for a larger geographic scope of sampling that may require addition of sites that do not have robust historic datasets. To address this comment and provide States/Tribes the flexibility in selecting sites of interest, EPA plans to provide Clean Water Act 106 funds to States and Tribes for monitoring under their own plans which will provide the opportunity for sampling a greater number of sites. This will allow States to select sites that meet their own assessment goals.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 3 - Page 3, Paragraph 4 Explain exactly what metrics or statistical measures will be used to determine if and when results have returned to historic, pre-release conditions. The Division and its partners also recommend that EPA add language to this section that addresses the potential of "mixed" results across the three primary media. This recommendation addresses what happens if the surface water chemistry or sediments have returned to historic, pre-release conditions but the benthic macroinvertebrate or fish communities remain depressed. Does EPA have a contingency plan to handle "mixed" results across the three primary media?	CDPHE 3- Please see the final Conceptual Monitoring Plan for the assessment methodology that describes the metrics and methods we will use A to evaluate the data by media type. For locations in which adequate historic and current data are available for comparison, water column, sediment and biological data will be used to determine if further study is needed. If these media with sufficient historic data sets present different results with respect to pre-release and benchmark comparisons, we will continue to monitor sediment, water, and biology. EPA's Office of Research and Development has undertaken a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with biological impacts related to the release. This information in conjunction with the water, sediment, and biological data gathered under this monitoring plan will help identify areas requiring further study.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 4 - Section III. Objectives and Study Questions Page 4, Bullet 1 It is recommended that EPA explain exactly how changes in surface water, sediment, and biological community trends, since the GKM Release Incident, will be identified statistically. In other words, what outcomes indicate that conditions are okay or a meaningful change occurs between pre- and post-release conditions?	CDPHE 4- Please see the final Conceptual Monitoring Plan as additional details describing EPA's anticipated assessment approaches have been included.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 5 - Section III. Objectives and Study Questions Also, related to Objective A, EPA should clarify what the period of record will be regarding datasets used to compare pre- and post-release conditions. Is it all data, regardless of time period, or will a standardized period of record be used, e.g. 5 years or 10 years?	CDPHE 5- The EPA has defined the period of record from 2009 to a time prior to the GKM plume, which will vary location by location, but is generally early August 2015. The third American Tunnel bulkhead was installed in December 2002; however it did not eliminate discharge. For a brief period from January 2003 to May 2004, the discharge was actively treated at the Gladstone area treatment plant. All treatment stopped when the ponds were dismantled in May 2005. Treatment has not recommenced since this point although pilot projects have been tested. In Spring 2007, breach discharges from Gold King 7 heavily impacted the North Fork of Cement Creek. In order to avoid capturing these events that do not represent current conditions, the EPA will not use data from this time period. Data availability from 2007 to 2009 is limited. In 2009, regular EPA sampling began, establishing a reliable, relatively robust dataset. Hence, our period of record will begin in 2009.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 6 - Section III. Objectives and Study Questions Page 4, Paragraph 3 This speaks to the last sentence that reads "Include biological community and biological tissue data-set comparisons if historic datasets allow". Above, the Division and its partners already recommended adding the biological community to the list of primary media. To further this thinking, please detail what State indices or biological metrics will be used to compare before and after with the biological community. The Division would recommend the Colorado Multi-metric Index for benthic macroinvertebrate condition comparisons in Colorado, but would also advocate for categorical metrics that improve understanding of diversity, richness, pollution, and taxa dominance across all sites regardless of State.	CDPHE 6- Yes, we will use Colorado's MMI method in Colorado. Please see Final Conceptual Monitoring Plan describing EPA's anticipated assessment approaches. The Colorado Multi-metric Index for benthic macroinvertebrate condition comparisons will be used for CO. Categorical metrics that improve understanding of diversity, richness, pollution, and taxa dominance will be used in cases where it remains informative of post-GKM conditions compared to historic conditions. Multi-metric Indices used in historic data collection vary by location (State/Tribe). In order to compare against historic data, EPA will utilize the MMI used in historic data collection. Additionally, for those sites that are not using NRSA methods for sampling biology, there will be a need to follow the same OTU list, as well as using the same autecology used by the States and Tribes to create their individual metrics and ultimately MMIs.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 7 - Page 5, under Study Questions – Objective A: The Division and its partners recommends adding the sentence "How do they compare to State water quality standards and/or screening levels?" to Sub-section 1a. It would make more sense to have this sentence under both Objectives A and B since State water quality standards should be used as a point of reference at sites with robust historic datasets (Objective A) or without (Objective B).	CDPHE 7- Thank you. This will be clarified as EPA plans to compare water column data collected under Objective A to appropriate State/Tribal water quality standards.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 8 - Page 6, under Study Questions – Objective B: Clarify what is meant by "previous assessments" in Sub-section 1d. Is this referring to current EPA assessment efforts using data in a recent period of record before the event or is this referring to the assessment efforts for the most recent Integrated Reporting cycle? Additional clarity here would provide transparency on how this study question will be answered in the future. The Division and its partners would recommend adding a comprehensive table, as an attachment, that would summarize historical, pre-release water quality data and assessment results. This would include assessment statistics used (e.g. for Colorado, the 85th percentile for chronic standards), the number of samples (e.g. n=___), the corresponding water quality standards, by State, for those same parameters.	CDPHE 8- Yes, the text refers to previous Integrated Report cycle assessments where available. Please see the final Conceptual Monitoring Plan for additional detail describing EPA's anticipated assessment approaches. In tribal jurisdictions, Integrated Report assessments are not available; hence, tribal or EPA assessment information may be used.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 9 - Section IV. Monitoring Frequency and Analytes of Interest Page 7, Table 1 How will EPA staff mobilize or react to a stormwater event on short notice. It is the Division's experience that stormwater events are highly variable and occur with little to no notice. Accessing sites can be difficult during storms. Does EPA intend to collect stormwater samples at each site listed in Table 2? If so, how will EPA mobilize staff in time to visit each site in Table 2 after a stormwater event? The Division and its partners recommend bolstering the section on Stormwater Sampling, perhaps in the forthcoming EPA Sample Analysis Plan, to detail what sites will be visited and how/where EPA staff will mobilize upon incidence of precipitation events.	CDPHE 9- EPA agrees with the commenter that collections of stormwater samples present logistical challenges that should be addressed. We have already conducted storm sampling in Animas and have field staff in the area available to react to storm events. However, downstream segments of the watershed will be more challenging. EPA hopes to coordinate with States/Tribes/and locals to accomplish storm event sampling. States and Tribes may also consider inclusion of storm event sampling in their Clean Water Act 106 Objective B plans. To supplement our understanding of contaminant and sediment transport in this watershed, EPA's Office of Research and Development is undertaking a fate and transport modeling effort designed to predict water and sediment impacts throughout the watershed. This model along with sample collection will support our understanding of fate and transport in this system. Due to logistical challenges such as mobilization times and site access, EPA may choose to sample for stormwater at a subset of those sites identified in Table 2 of EPA's plan. Additionally, the use of unmanned automated samplers may be employed for stormwater sampling.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 10- The Division and its partners recommend collecting stormwater samples on Cement Creek, too.	CDPHE 10- The Conceptual Monitoring Plan will be clarified to reflect storm water sampling in Cement Creek.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 11- The Division and its partners recommend adding Total Organic Carbon (TOC) and Redox (Oxidation/Reduction) Potential or "ORP" measures to the Sediment sampling.	CDPHE 11- We agree that analysis of redox and TOC assist in predicting the potential availability/toxicity of metals in sediments. However, since redox potential and TOC fluctuate spatially and temporally, it would be more conservative to compare total metals values against benchmarks for estimation of risks. Therefore, to be conservative, we plan to compare total metals concentrations in sediments to applicable benchmarks and assume worst case availability for risk estimation.

10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 12- The Division and its partners recommend extending at least benthic macroinvertebrate sampling beyond the one-year plan to two or three years. The reason for this extension is that macroinvertebrates are integrators of slow changes to water and sediment quality. It could take several fall index periods for the macroinvertebrates to exhibit a response to both the initial GKM slug and the continuing introduction of heavy metals still flowing from the Gold King mine and other abandoned mines.	CDPHE 12- We plan to use water column, sediment, and biological data (including tissue data) to support the determination of maintenance of historic conditions for any site in which historic data are adequate to identify sites that may require further study beyond the one-year initial timeframe of the plan. For sites requiring further study, water, sediment, and biological monitoring will be extended into the future. Regarding use of biological data, we strove to provide enough time for the biological communities to show effects while minimizing time and opportunity for confounding factors to also impact those communities. Because biological communities integrate many environmental factors, the further removed in time that monitoring occurs, the more confounded the data will be with respect to the GKM Release Incident and the more difficult the data will be to interpret. Hence, EPA will determine if additional biological monitoring is necessary subsequent to the fall 2016 event and as informed by EPA's Office of Research and Development's fate and transport modeling designed to predict potential biological impacts of the release. Additionally, States and Tribes have the opportunity to consider additional biological monitoring in their Clean Water Act 106 funded plans.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 13- Further expand what measures of physical habitat will be collected in the forthcoming EPA Sample Analysis Plan. How will this information inform decision making in the future?	CDPHE 13- The methods are described in EPA's National Rivers and Streams Assessment (NRSA) methods link provided in the Conceptual Monitoring Plan. Physical habitat data supports understanding of expected biological conditions within a segment. http://www2.epa.gov/sites/production/files/2013-11/documents/nrsa_field_manual_4_21_09.pdf
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 14- The Division and its partners recommend identifying which parameters listed at the bottom of Table 1 will be analyzed for the dissolved, total and total recoverable fractions, respectively. Will the same suite of total recoverable metals be analyzed for sediment as water column? If so, add the footnote to sediment as well. This detail may be further clarified in EPA's forthcoming Sample Analysis Plan.	CDPHE 14- Thank you. We will clarify the table and footnote in the Conceptual Monitoring Plan and make this clear in the QAPP.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 15- Section V. Site Selection and Assessment Approach Page 8, under Assessment Summary: The term "quality" of historic data is used for the first time as pre-requisite for data assessment method development. In previous sections, discussing comparisons of pre- and post-release data, EPA did not include the same references to the "quality" of the data. Define what quality measures will determine what datasets are retained for analysis. In other words, what criteria will exclude historic datasets?	CDPHE 15- EPA has quality control guidelines for use of secondary data which will be referenced in our Conceptual Monitoring Plan and QAPP. Data will be published to the Water Quality Portal (http://waterqualitydata.us) through STORET/WQX. EPA will work with cooperators to ensure that their data, used in the assessment, is also made available in the Water Quality Portal through STORET/WQX.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 16- Page 8, 1st bullet This sentence should read "If the one-year monitoring study indicates that post-release water quality, sediment, and biological trends are similar to trends observed prior to the GKM release:"	CDPHE 16- Thank you. That sentence will be corrected.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 17- Page 8, 2nd bullet The Division and its partners recommend that EPA develop a decision-rule in this section in the event that the one-year monitoring study concludes that pre-release water quality and sediment trends have degraded since the GKM release but the screening levels or water quality standards are not yet exceeded. This could result in a scenario where EPA may not conduct additional site-specific investigations while screening levels or water quality standards are perhaps inconclusive or near exceedance but not yet exceeding.	CDPHE 17- We will add a decision rule to address inconclusive but near exceedance conditions. Also, please refer to our updated assessment methodology.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 18- Page 9, Screening Levels and Water Quality Standards The list of federally approved applicable State and Tribal water quality standards are listed and referenced by website. There are no references to federal screening levels in this list. Will federal screening levels be used? If so, they should be included in this list and referenced. There are no screening levels for metals in sediment included in the Colorado Regulations as referenced in this list. What will EPA use when evaluating sediment data in these cases? The Division and its partners would recommend at some point to add another table as an attachment that clearly lays out the applicable screening levels for each parameter by State or Tribe, as well as federal. Please list screening levels for sediment exposure, drinking water ingestion, and fish tissue consumption.	CDPHE 18- These will be included in the Final Conceptual Monitoring Plan.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 19- Section VI. Potential Sampling Locations Page 9, Table 2 This is in reference to the second row with site A68 (EPA). The rationale for selecting this location is because it would serve as a "reference condition" for the release. There is uncertainty how establishing a reference condition at this location will contribute to the framework of pre- and post-release dataset comparisons. For instance, will primary media data collected at this location prior to the release be used for comparison to the Cement Creek location or lower Animas River locations that experienced the GKM spill? Therefore, the Division and its partners recommend that EPA illuminate how this location will be used as a reference condition and in what context. The Division and its partners support recommendations from other parties that fine-tune where sediment samples are collected.	CDPHE 19- We should clarify the term reference site and instead use control or background site instead as suggested in one of your other comments. The A68 location represents the Animas River before the confluence with Cement Creek. EPA plans to collect data from this site to understand the load of metals in the watershed upstream of the influence of the GKM release. The load in the upper Animas will be influenced by the numerous mines in the area that continue to discharge. Capturing data above GKM helps one to understand the relative continuing contribution of GKM in the watershed during a sampling event and helps to identify (or rule out) confounding upstream events that may be occurring concurrently making data interpretation difficult. EPA is adding site M34 at the confluence of Mineral Creek and the Animas River, for the same purpose. In addition, EPA is adding a site on the San Juan that is upstream of the confluence with the Animas. All these locations provide us with an understanding of the background load in the watershed that is not under the influence of the GKM release incident. Unexpectedly high loads or excess assimilative capacity identified during a sampling event may be understood more fully with respect to GKM when placed in context with the concurrent background conditions in the watershed.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 20- Page 10, Table 2 The Division has a station at Bakers Bridge, too. It is WQCD Station # 81. The Division invites EPA to use data from WQCD Station # 81 to bolster the historic, long-term data record.	CDPHE 20- EPA is interested in using the Colorado WQCD's Baker Bridge data in its objective A assessment.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 21- Page 10, Table 3 When will the TBD be determined?	CDPHE 21- Table 3 has been updated with our current understanding of historic data availability.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 22- Section IX. Data Management The Division and its partners recommend that the long-term data sharing and storage strategy consider accessibility to the general public. This strategy should consider various ways to communicate progress that is easy to interpret. Will the online SCRIBE database only include the EPA data or will EPA upload data from other sources?	CDPHE 22- EPA will upload EPA-collected data from SCRIBE into STORET/WQX so that it is publicly available. EPA will also provide some support for uploading data to STORET/WQX to other cooperators with relevant historic data.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 23- The Division and its partners recommend adding a comprehensive table, as an attachment, that would summarize historical, pre-release water quality data (e.g. for Colorado, the 85th percentile for chronic standards), the number of samples (e.g. n=___), the corresponding water quality standards, by State, for those same parameters, and then at a later time, add in the post-release water quality data. This would visually improve presentation of pre- and post-release data, the number of data points, and the State water quality standards that are used to assess attainment of standards and change in water quality trends.	CDPHE 23- We will plan to add a summary table as described. The Water Quality Portal allows direct access to all of the data that will be considered. EPA will evaluate approaches to leverage the Portal web services to provide interactive viewers for the data and assessment tools.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 24- Explain what human health "screening levels" will be used beyond simply listing website links. In other words, how would someone access those screening levels and understand how they would apply in an assessment?	CDPHE 24- These will be included in the Final Conceptual Monitoring Plan.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 25- The aforementioned recommendation also ties into a broader theme shared by the Division and its partners that the revised draft of the Conceptual Monitoring Plan must be easy to read and understood by the general public.	CDPHE 25- Thank you.

10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 26- Add a section to the plan in which notification of "special" events or on-going findings are consistently and rapidly communicated to the public and agencies supporting the public. Such a section would detail what would constitute a special event and the routes of communication that would convey that information directly to the public.	CDPHE 26- The Conceptual Monitoring Plan's focus is gathering data to support a determining of changes in the watershed associated with the Aug. 5 GKM release incident. On-going findings will be reported via the Water Quality Portal to allow direct access to all of the data. EPA will evaluate approaches to leverage the Portal web services to provide interactive viewers for the data and assessment tools. EPA's Conceptual Monitoring Plan will also contain a communication plan to address data reporting and notification. Regarding special events and emergencies, EPA convened a meeting with States/Tribes/Locals on Feb. 5, 2016 to discuss funding for and interest in State/Tribal plans to address concerns not covered under EPA's Conceptual Monitoring Plan. Two work groups have been formed as a result of the meeting and one has the specific charge of addressing the need for adaptive response and early warning systems in the watershed. Communications approaches and notifications will be considered in this workgroup.
10/8/2015	Comment mailbox	CDPHE, San Juan County Public Health, San Juan Basin Health Dept.	CDPHE 27- The Division and its partners suggest adding an Executive Summary at the front of the document so readers can rapidly become acquainted with the large body of the material without having to read it all.	CDPHE 27- Thank you. We will add an executive summary.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 1 - Colorado Parks and Wildlife (CPW) appreciates the opportunity to comment on EPA's Post-Gold King Release Incident: Conceptual Monitoring Plan for Surface Water, Sediments, and Biology. CPW manages the fisheries in much of the Animas River in Colorado, and has an interest in identifying any long-term impacts to biological communities from the Gold King Mine release. CPW and our River Watch (RW) program are willing to collect water quality samples, fish community data, and fish tissue samples at EPA's request.	CPW1- We appreciate your comments and willingness to collect samples. We will plan on coordinating with you going forward.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 2 - CPW has a long record of fish community metrics at many locations in the Animas River including historical data, pre-release data, and post-release data (Table 1). EPA may request the data for surveys of interest. CPW routinely surveys the fish community in two stretches of the Animas River through Durango: From the Durango High School Footbridge to the 9th Street Bridge, and from the pump plant to the Highway 160 High Bridge. [see table 1 in "CPW tables" tab]	CPW2- EPA is very interested in using the historic fish data as part of the Objective A assessment.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 3 - CPW completed fish surveys in these two stretches of the Animas near Durango just before and after the Gold King Mine release, and is planning to resurvey those populations in the next year to evaluate any changes in fish communities or recruitment. CPW is also planning to examine reproduction by fry shocking at eight locations on the Animas that were sampled annually from 1996-1999: Bakers Bridge, Trimble, Durango High School Footbridge, above Carbon Junction Canyon (behind the mall), Hwy 160 Crossing (High Bridge), Basin Creek, Weaselskin Bridge, and High Flume Canyon. [see table 1 in "CPW tables"tab]	CPW3- EPA is very interested in using the historic fish data as part of the Objective A assessment.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 4 - CPW's River Watch program has water quality data at many locations in the Animas River including historical data, pre-release data, data from the release itself, and post-release data. Table 2 includes a list of active RW stations, although additional RW sampling stations also have historic and pre-release data, which can be provided at EPA's request. [see table 2 in "CPW tables" tab]	CPW4- EPA is very interested in using the Colorado River Watch water quality and macroinvertebrate data as part of the Objective A assessment.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 5 - CPW is aware of other sources of water-quality and biological data collected in the Animas River prior to the release, during the release, and after the release.	CPW5- EPA is compiling a matrix of data sources and would like to double check with CPW to make sure that none are overlooked.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 6 - USGS published the results of water, sediment, periphyton, macroinvertebrate and fish data collected in the late 1990's in Integrated investigations of environmental effects of historical mining in Upper Animas watershed, San Juan County, Colorado (Anderson 2007, Besser et al. 2001, Besser et al. 2006, Besser and Brumbaugh 2007, Besser and Leib 1999, and Besser and Leib 2006). Tables 3 and 4 summarize the USGS data from that report that may be useful for establishing pre-release conditions in portions of the Animas and published [see Tables 3 and 4 in "CPW tables" tab]	CPW6- EPA anticipates using a period of record from 2009 to early August 2015 (prior to the plume) for pre-incident condition for Objective A assessment efforts. The USGS data referred to predates this period. Therefore, the USGS data referred to would be best suited in 106 activities that the States and/or Tribes may undertake.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 7 - Colorado's Water Quality Control Division (WQCD) has macroinvertebrate data for several locations, and periphyton data from the Animas River near Trimble (Table 5). [see table 5 in "CPW tables" tab]	CPW7- EPA is very interested in using the Colorado WQCD water quality and macroinvertebrate data as part of the Objective A assessment.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 8 - Sgro et al. (2007) evaluated diatom communities in the Animas River in relation to metals concentrations and pH (Table 6). [see table 6 in "CPW tables" tab]	CPW8- Thank you for providing this information. Based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. States/Tribes may develop and implement their own plans to include additional analytes, sampling locations, and frequencies etc. EPA's final Conceptual Monitoring Plan will be modified to focus solely on Objective A as drafted and EPA and its contractors will plan to sample Objective A sites and parameters. In determining if this comment applies to Objective A and should be added to EPA's Conceptual Monitoring Plan, we considered the age of the historic data available for comparison. We are concerned that much of the data referenced in the comment are old enough that they are unlikely to represent pre-release conditions. A number of activities that affected water quality in the watershed have occurred since these data were taken (see attached timeline from the Animas River Stakeholders Group). The EPA has selected a 2009 to August 2015 period of record to characterize pre-release conditions based upon standard EPA, State and tribal practice and an understanding of activities within the watershed that affect water quality. States or Tribes may wish to consider including this in their own sampling plans.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 9 - Courtney and Clements (2002) analyzed macroinvertebrate communities and zinc concentrations in macroinvertebrates in the Animas River watershed in 1998 and 1999 (Table 7). [see table 7 in "CPW tables" tab]	CPW9- Thank you for providing this information. Based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. States/Tribes may develop and implement their own plans to include additional analytes, sampling locations, and frequencies etc. EPA's final Conceptual Monitoring Plan will be modified to focus solely on Objective A as drafted and EPA and its contractors will plan to sample Objective A sites and parameters. In determining if this comment applies to Objective A and should be added to EPA's Conceptual Monitoring Plan, we considered the age of the historic data available for comparison. We are concerned that much of the data referenced in the comment are old enough that they are unlikely to represent pre-release conditions. A number of activities that affected water quality in the watershed have occurred since these data were taken (see attached timeline from the Animas River Stakeholders Group). The EPA has selected a 2009 to August 2015 period of record to characterize pre-release conditions based upon standard EPA, State and tribal practice and an understanding of activities within the watershed that affect water quality. States or Tribes may wish to consider including this in their own sampling plans.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 10 - Macroinvertebrates were sampled from several sites by Sam Duggan from Will Clements' lab at Colorado State University 24 to 36 hours after the leading edge of the Gold King plume was running down the Animas River. [see table 8 in "CPW tables" tab]	CPW10- Thank you for this information.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 11 - The Animas River Stakeholders Group and Mountain Studies Institute may also have additional chemical and biological data for relevant portions of the Animas River watershed.	CPW11- EPA is very interested in using Animas River Stakeholders Group (ARSG) and Mountain Studies Institute (MSI) water quality and macroinvertebrate data as part of the objective A assessment.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 12- Selected Monitoring Sites CPW suggests moving site GKM01 (Animas River at Southern Ute Reservation Boundary) 1.4 miles upstream to Animas at Hwy 160 bridge crossing (37.235759, -107.868852). CPW routinely surveys the fish community from the pump plant to the Highway 160 High Bridge. Below Highway 160, the Animas River widens and is too shallow and rocky to be effectively surveyed by raft. The Animas at Highway 160 High Bridge also has a better existing data set for water quality data (RW site 3580, sampled from 2002-2015; WQCD site 9418, sampled 2009-2010), macroinvertebrate community data (Anderson 2007; ARSG, sampled in 2003), and fish community data (CPW 2002-2015).	CPW12- EPA appreciates insight into sample site selection. Your comments are being incorporated.

10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 13- Addition of Control Sites CPW suggests adding control sites in un-impacted tributaries to establish any basin-wide trends in biological communities or water-quality during EPA's monitoring period. Data from control sites is needed to understand if changes in biologic communities in the Animas are due to the Gold King release or climate, particularly if flows or temperatures in the coming year are significantly different from baseline conditions. Junction Creek and Hermosa Creek are good candidates to establish these trends. Junction Creek has a roller dam at the mouth that acts as a fish barrier to prevent migration between this tributary and the Animas, and has a good record of baseline water-quality and biological data. RW and WQCD have water-quality data for Junction Creek. WQCD has periphyton community data and biomass data for Junction Creek, and EPA may have periphyton data as well (REMAP). WQCD, EPA and Sam Duggan have macroinvertebrate community data for Junction Creek, and CPW has fish community records as well. Hermosa Creek could be sampled approximately 5-miles upstream of the mouth to minimize the chances of collecting fish migrating between Hermosa Creek and the Animas River. Hermosa Creek also has existing water-quality data, macroinvertebrate community data, and fish community data. RW and WQCD have water-quality data for Hermosa Creek. WQCD and Sam Duggan have macroinvertebrate community data for Hermosa Creek, and CPW has fish community records as well.	CPW13- Four control/reference/background sites are being added or considered including: Animas River above cement Creek, Cement Creek above the GKM, Mineral Creek just upstream of the Animas, and a sample site on the San Juan above the Animas River confluence.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 14- Water Quality The biotic ligand model (BLM) considers the influence of hardness and other water-quality parameters on the toxicity of metals to aquatic organisms . CPW suggests adding water-quality parameters included in the copper BLM, since copper is one the metals of concern in the Animas River. Copper BLM parameters that are not specifically listed in EPA's current monitoring plan are dissolved inorganic carbon (or alkalinity), chloride, and sulfate. Sulfide is not used in the current version of the BLM, but is likely to be included in future versions of the model.	CPW14-In the event that there is interest in use of the BLM by other parties, we have added alkalinity to our suite of analytes as suggested. We note that the BLM is most sensitive to pH and dissolved organic carbon (DOC), for which we are sampling and analyzing. For the other anion and cation inputs you suggest, one could rely on ecoregional reference values for the BLM. Hence, we have decided not to add these analytes as the BLM has not been adopted into water quality standards for the waters affected by GKM at this time and likely will not be used in our assessment. With the information we are collecting and ecoregional reference values, there should be sufficient information for other parties to employ the BLM if desired.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 15- Periphyton Biomass CPW suggests adding periphyton biomass and metals analysis to EPA's monitoring plan. Periphyton biomass is inversely related to the iron concentration in periphyton, therefore primary productivity is likely to be reduced by sediment deposition from the Gold King Mine release. There are several sources of pre-release periphyton biomass data for the Animas River (Besser et al. 2001, Besser and Brumbaugh 2007, Courtney and Clements 2002, WQCD site 9426).	CPW15- Thank you for providing this information. Based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts under their own plans. States/Tribes may develop and implement their own plans to include additional analytes, sampling locations, and frequencies etc. EPA's final Conceptual Monitoring Plan will be modified to focus solely on Objective A as drafted and EPA and its contractors will plan to sample Objective A sites and parameters. In determining whether this comment applies to Objective A and should be added to EPA's Conceptual Monitoring Plan, we considered if historic data area available for comparison for the media/analytes you suggest. We are concerned that periphyton biomass and metals data captured in the CPW tables are old enough that they are unlikely to represent pre-release conditions in light of a number of activities that affected water quality since these data were collected (see attached timeline developed by the Animas River Stakeholders Group). For Objective A, the EPA has selected a 2009 to August 2015 period of record to characterize pre-release conditions based upon EPA, State, and tribal standard practice and an understanding of activities within the watershed that affect water quality. Although the Besser and Brumbaugh 2007 study is referenced in this comment, that study did not appear to include periphyton biomass or metals (per CPW Table 4). Besser and Brumbaugh 2007 did include fish and macroinvertebrate metals, which we are planning to collect. Additionally, there are no periphyton metals standards/benchmarks against which we could compare. Though we do not plan to incorporate periphyton analysis, States or Tribes may wish to consider including this matrix in their own sampling plans.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 16- Macroinvertebrate Community CPW suggests using a Hess sampler to collect macroinvertebrate community data rather than the Rapid Bioassessment Protocol . Hess sampling is a quantitative method that allows density to be compared across sites, and allows variability to be calculated. EPA will need to know the variability in samples collected at a single site and sample date to make statistical comparisons between sites, or to make statistical comparison at the same site through time. CPW also recommends targeting a single habitat such as riffles, since habitat strongly influences the macroinvertebrate community.	CPW16- We will not be using the Rapid Bioassessment Protocol unless it was used historically. In instances where historical data were only collected using a particular method, the same method will be used to insure data comparability.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 17- Fish Community CPW supports EPA's inclusion of fish community in the study plan. CPW has not observed acute impacts to the fish community from the Gold King Mine release to date, but it is possible that a reduction in fish biomass could be observed due to reduction in primary productivity due to smothering of periphyton.	CPW17- Thank you for this comment and your offer to conduct fish surveys in Colorado. We would like to work with you to conduct the fish surveys in Colorado in order to ensure that the data are comparable to historic data and useful to CPW and CDPHE. In instances where historical data were collected using a particular method, the same method will be used to insure data comparability.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 18- Reductions in growth and reproduction could also occur due to fine sediment impacts to redds, or through trophic transfer of metals from the deposited sediments to algae, macroinvertebrates, and fish. CPW's comments about the ability to survey fish populations at EPA's proposed sites are summarized in Table 9. [see table 9 in "CPW tables" tab]	CPW18- Thank you for this information. We will utilize the information in Table 9 to update our anticipated fish survey sites and would like to work with CPW to finalize those sites.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 19- Fish Histopathology CPW suggests adding histopathological analysis of fish gills, kidney, liver, and spleen, which can show sub-lethal impacts from metals. CPW has noted low rates of recruitment for many trout species in the Animas River. Histopathological endpoints can give an indication of sub-lethal stress due to metals exposure that may be contributing to low rates of recruitment.	CPW19- Based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. States/Tribes may develop and implement their own plans to include additional analytes, sampling locations, and frequencies etc. EPA's final Conceptual Monitoring Plan will be modified to focus solely on Objective A as drafted and EPA and its contractors will plan to sample Objective A sites and parameters. In determining whether this comment applies to Objective A and should be added to EPA's Conceptual Monitoring Plan, we considered if historic data area available for comparison for the media/analytes you suggest. Pre-release/historic data are not available to enable evaluation of histopathological data and information under Objective A.; so, these will not be added to our plan. States or Tribes may wish to consider including these matrices in their own sampling plans.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 20- Metals in Periphyton, Macroinvertebrates and Fish CPW also recommends metals analysis of periphyton, macroinvertebrates, and fish to examine tropic transfer factors of various metals through a hypothetical stream food-chain (periphyton-invertebrate-fish).There are several sources of baseline trophic transfer data for the Animas River (Besser et al. 2001, Besser and Brumbaugh 2007, Courtney and Clements 2002).	CPW20-Thank you for providing this information. Based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. States/Tribes may develop and implement their own plans to include additional analytes, sampling locations, and frequencies etc. EPA's final Conceptual Monitoring Plan will be modified to focus solely on Objective A as drafted and EPA and its contractors will plan to sample Objective A sites and parameters. In determining whether this comment applies to Objective A and should be added to EPA's Conceptual Monitoring Plan, we considered if historic data area available for comparison for the media/analytes you suggest. The periphyton biomass and metals data captured in the CPW tables are old enough to raise concern that they are unlikely to represent pre-release conditions. The EPA has selected a period of record from 2009 to August 2015 to characterize pre-release conditions based upon standard EPA, State and Tribal practice and an understanding of activities within the watershed that affect water quality (see attached timeline from Animas River Stakeholders Group). Although the Besser and Brumbaugh 2007 study is referenced in this comment, that study did not appear to include periphyton biomass or metals (per CPW Table 4). Besser and Brumbaugh 2007 did include fish and macroinvertebrate metals, which we are planning to collect. Though we do not plan to add periphyton sampling into our plan, States or Tribes may wish to include this in their own sampling plans.

10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 21- CPW supports metals analysis of the entire macroinvertebrate community, which may provide information about dietary metals exposure to fish when they consume macroinvertebrates. Sub-lethal metals exposure through the diet may be more important than aqueous metal exposures for trout (Woodward et al. 1994).	CPW21- Thank you. We plan to analyze metals in macroinvertebrate and fish tissues.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 22- CPW also recommends analyzing metals in caddisflies in the genus Arctopsyche, or other members of Hydropsychidae for longitudinal comparison of metals bioavailability. Metals accumulation varies considerably among macroinvertebrate taxa, and is strongly influenced by each taxon's preferred food source (Goodyear and McNeill 1999). Thus, the metal content of the macroinvertebrate community varies as the community composition changes throughout the year and across locations. This variability in macroinvertebrate community metals concentrations will mask trends. Arctopsyche (or other member of Hydropsychidae) is an ideal taxon for longitudinal comparisons of metal bioavailability, since it can be found in most stream environments, it is tolerant of elevated metals, its metal content is well studied in the literature, and its body is mostly soft tissue that is easy to analyze. USGS measured cadmium, copper, lead and zinc in Arctopsyche, Rithrogena (mayfly), Megarcys (stonefly) and Zapada (stonefly) in 1996 and 1997 in the Animas River at several locations above and below Cement Creek, and in several tributaries (Besser et al 2001, Besser and Brumbaugh 2007). Since there is baseline data for these taxa, CPW recommends these taxa also be analyzed for metals at stations located near the original collection sites.	CPW22- Thank you for providing this information. Based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. States/Tribes may develop and implement their own plans to include additional analytes, sampling locations, and frequencies etc. EPA's final Conceptual Monitoring Plan will be modified to focus solely on Objective A as drafted and EPA and its contractors will plan to sample Objective A sites and parameters. In determining if this comment applies to Objective A and should be added to EPA's Conceptual Monitoring Plan, we considered if historic data are available for comparison. We are concerned that much of the data referenced in the comment are old enough that they are unlikely to represent pre-release conditions. A number of activities that affected water quality in the watershed have occurred since these data were collected (see attached timeline from the Animas River Stakeholders Group). The EPA has selected a 2009 to August 2015 period of record to characterize pre-release conditions based upon standard EPA, State and tribal practice and an understanding of activities within the watershed that affect water quality. Although the publication date for Besser and Brumbaugh is 2007, we note that the study used data from samples collected in 1997 and 1998. States or Tribes may wish to consider including this comment in their own sampling plans.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 23- CPW recommends adding metals analysis for individual fish organs such as gills, liver, kidney, spleen, pyloric caeca and/or stomach, since metals are preferentially partitioned in those organs depending on the metal and the exposure pathway (Farage et al. 1994; Farage et al. 1995). Muscle tissue is generally the last place that will show evidence of metals exposure, and nearly always has lower concentrations of metals than gills, liver, kidney and spleen (Jezierska and Witeska 2006). Gills and kidney may preferentially accumulate metals from water exposure (Farag et al 1994). Pyloric caeca and stomach tissue may preferentially accumulate metals due to dietary exposure (Farag et al. 1994). Therefore, analysis of individual tissues may help determine the pathway of metals exposures to fish.	CPW23- Thank you for providing this information. Based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. States/Tribes may develop and implement their own plans to include additional analytes, sampling locations, and frequencies etc. EPA's final Conceptual Monitoring Plan will be modified to focus solely on Objective A as drafted and EPA and its contractors will plan to sample Objective A sites and parameters. In determining if this comment applies to Objective A and should be added to EPA's Conceptual Monitoring Plan, we considered if historic data are available for comparison. We are concerned that much of the data referenced in the comment are old enough that they are unlikely to represent pre-release conditions in light of a number of water quality-affecting activities that occurred since these data were collected. These activities are described in the timeline developed by the Animas River Stakeholders Group. The EPA has selected a 2009 to August 2015 period of record to characterize pre-release conditions based upon standard EPA, State and tribal practice and an understanding of activities within the watershed that affect water quality. States or Tribes may wish to consider including this comment in their own sampling plans.
10/20/2015	Hardcopy in mail (via USPS)	Colorado Parks and Wildlife	CPW 24- USGS measured cadmium, copper, lead and zinc in brook trout liver in 1996 and 1997 for the Animas River above Silverton and at Needleton (Besser et al. 2001, Besser and Brumbaugh 2007). Since there is baseline data for brook trout liver at these locations, CPW recommends EPA analyze metals in fish-liver tissue at stations located near the original collection sites at a minimum.	CPW24- Thank you for providing this information. Based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. States/Tribes may develop and implement their own plans to include additional analytes, sampling locations, and frequencies etc. EPA's final Conceptual Monitoring Plan will be modified to focus solely on Objective A as drafted and EPA and its contractors will plan to sample Objective A sites and parameters. In determining if this comment applies to Objective A and should be added to EPA's Conceptual Monitoring Plan, we considered if historic data are available for comparison. We are concerned that much of the data referenced in the comment are old enough that they are unlikely to represent pre-release conditions in light of a number of water quality-affecting activities that occurred since these data were collected. These activities are described in the timeline developed by the Animas River Stakeholders Group. Although the publication date for Besser and Brumbaugh is 2007, the study used data from samples collected in 1997 and 1998. The EPA has selected a 2009 to August 2015 period of record to characterize pre-release conditions based upon standard EPA, State and tribal practice and an understanding of activities within the watershed that affect water quality. States or Tribes may wish to consider including this comment in their own sampling plans.
9/22/2015	EPA Call with States, Tribes, Locals	Colorado Parks and Wildlife call	CPW Call 1- Would EPA consider analyzing fish tissues including muscle, as well as internal organs from fish that we have collected in the watershed after the release.	CPW Call 1- Yes, we would consider analyzing these samples. Assuming there is a QAPP for sampling, we would be most interested in the fillet or tissue plugs as they would be most comparable to historic data. However, internal organ analysis could be completed and informative as well.
9/22/2015	EPA Call with States, Tribes, Locals	La Plata County	LP Call 1 - Who will be our point of contact (POC) when Incident Command is "dissolved?" We need a single liaison and a clear POC as it has been confusing with everyone coming and going.	LP Call 1 - Cynthia Peterson, EPA Region 8 will be the liaison for communication post incident command dissolution. Her number is 303-312-6879.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 1 - Given the draft Watershed Monitoring Plan as presented, will the EPA be able to gather the breadth of information necessary to assess the impacts of the release? In other words, are the objective obtainable give the sampling plan proposed? Our recommendation: Use additional approaches to evaluate the impact of the release in addition to comparing pre-release and post-release datasets. Additional approaches include but are not limited to: fingerprinting using isotopic data to help quantify impacts and the source of impacts, using coring of sediment depositional areas to evaluate post-Gold King Release impacts versus deeper coring that would provide pre-Gold Kind Release impacts.	LP 1- We request additional information to consider this comment as it is unclear to us how fingerprinting using isotopic data and coring of sediment depositional areas will be able to differentiate between GKM sediments deposited over decades with those deposited during this single event. We welcome additional thoughts on this and are open to considering the suggestion. EPA's Office of Research and Development is undertaking a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with biological impacts related to the release. This information in conjunction with the water and sediment data gathered under this monitoring plan will help characterize impacts and identify areas requiring further study.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 2 - There is lack of quantification and benchmarks in regard to the comparison of pre-release data sets and post-release data sets. How will the changes caused by the release be quantified? In other words, what constitutes a statistically significant difference between pre-release and post-release data and what test will be used to measure the statistical significances? Will the proposed sampling program produce sufficient data to conduct the statistical test?	LP 2- Please see the final Conceptual Monitoring Plan as additional details describing EPA's anticipated assessment approaches have been included.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 3-Will only EPA data be used to determine the background data set from which comparisons will be made? Our recommendation: The EPA should use other available historical and pre-release data from the USGS, CDPHE, SUIT, City of Durango, ARSG, River watch, CPW, and others. Table 1 provides a summary of existing historical data sets.	LP 3- We are interested in data from other organizations. All data used will need to meet Agency QA/QC requirements. We greatly appreciate your list of historic data provided as Table 1 in your comment submission and will consider these data.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 4- While water quality is important in the subject reach of the animas River, there is an abundance of pre-release data for water quality. It is our opinion that future sampling of the water column may not be as important as evaluating the groundwater, sediments, benthos and fish tissue to evaluate impacts from the release. Our recommendation: Include representative sampling for sediments, benthos and fish tissue as detailed below in sections II and III. Representative sampling may require sampling at locations different from and for a longer duration that those sites targeted for water quality sampling.	LP 4- Thank you, our goal is to complete representative sampling of water, sediment, biological communities and tissues at a range of sites. While post-release water column data is readily available, we would like to continue to collect that data in order to ensure that conditions do not change and in order to have data coincident with other the sediment and biological data.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 5- Potential impacts to sediments, soils, groundwater, and surface water and the associated uses for agriculture, drinking water supplies, industrial, commercial including recreational use, and the aquatic environmental have been a public concern throughout the duration of this incident. Our recommendation: The Watershed Monitoring Plan should more fully investigated Objectives A and B as they relate to sediments, soils, groundwater and surface water and the associated uses for agriculture, drinking water, industrial, commercial including recreational use, and the aquatic environment. For example, water quality should be compared to agricultural water quality standards and guidance to provide information on if the water quality is suitable for agricultural use. A similar approach could be used for comparing water quality and sediment against exposure limits for recreational uses.	LP 5- Please see the final Conceptual Monitoring Plan as additional details describing EPA's anticipated assessment approaches have been included. Data will be assessed against designated uses of each segment based on risk screening levels and water quality standards for that segment/jurisdiction. This may vary across segments but will include aquatic life and human health uses for all segments. Data for segments which have designated uses and criteria to protect agriculture, commercial/industrial, and drinking water uses will be assessed against those uses as well. Currently soil and groundwater testing are not included in the Conceptual Monitoring Plan. EPA convened a meeting with States/Tribes/Locals on Feb. 5, 2016 to discuss funding for and interest in State/Tribal plans to address media and analytes not covered under EPA's Conceptual Monitoring Plan. Two work groups have been formed as a result of the meeting to address additional stakeholder monitoring needs include the need for groundwater/well water testing. In addition, EPA's Office of Research and Development has undertaken a modeling effort to better understand the fate and transport of contaminants from the GKM Release Incident and potential impacts on groundwater. This effort will be used to further refine EPA's monitoring approach for groundwater which will be addressed under a separate effort from this Conceptual Monitoring Plan.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 6- For complete water quality general parameters, recommend adding TSS, TDS and alkalinity.	LP 6- We have added TSS and alkalinity. We are measuring specific conductance, which closely approximates TDS. Historic TDS data are not available and there are no water quality standards against which to compare TDS data.

10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 7- Recommend adding nutrients including: TP, TN, nitrite, nitrate and ammonia to water column sampling.	LP 7- Based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. States/Tribes may develop and implement their own plans to include a broader array of analytes, sampling locations, and frequencies etc. EPA's final Conceptual Monitoring Plan will be modified to focus solely on Objective A as drafted and EPA and its contractors will plan to sample Objective A sites and parameters. In determining if this comment applies to Objective A and should be added to EPA's Conceptual Monitoring Plan, we considered if the suggested analytes are associated with the GKM Release Incident. Though these analytes may provide an indication of the potential redox condition in sediments and the water column that could affect metals availability, they are not directly associated with the GKM release. To be conservative, we will use total metals concentrations in water and sediment to compare against benchmarks to estimate risk rather than estimating metals availability. Hence, an understanding of redox conditions is not required for our assessment. However, this comment could be addressed in a State or tribal plan if a more general watershed characterization including trophic status is of interest.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 8- Recommend adding TP and TN to sediment sampling. (Note: Although the GKM is not know to be a source of N or P, the presence of these nutrients in sediments influences the chemistry of water, which can affect the mobility of metals: understanding nutrient concentrations in sediment will benefit the understanding of mechanisms that may affect the concentrations of metals in water and sediment).	LP 8- Based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. States/Tribes may develop and implement their own plans to include a broader array of analytes, sampling locations, and frequencies etc. EPA's final Conceptual Monitoring Plan will be modified to focus solely on Objective A as drafted and EPA and its contractors will plan to sample Objective A sites and parameters. In determining if this comment applies to Objective A and should be added to EPA's Conceptual Monitoring Plan, we considered if the suggested analytes are associated with the GKM Release Incident. Though these analytes may provide an indication of the potential redox condition in sediments and the water column that could affect metals availability, they are not directly associated with the GKM release. To be conservative, we will use total metals concentrations in water and sediment to compare against benchmarks to estimate risk rather than estimating metals availability. Hence, an understanding of redox conditions is not required for our assessment. However, this comment could be addressed in a State or tribal plan if a more general watershed characterization including trophic status is of interest.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 9- Recommend adding Chlorophyll-a (algae) and periphyton biomass for water column sampling.	LP 9- Based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. States/Tribes may develop and implement their own plans to include a broader array of analytes, sampling locations, and frequencies etc. EPA's final Conceptual Monitoring Plan will be modified to focus solely on Objective A as drafted and EPA and its contractors will plan to sample Objective A sites and parameters. In determining if this comment applies to Objective A and should be added to EPA's Conceptual Monitoring Plan, we considered if the suggested analytes are associated with the GKM Release Incident and if historic data are available for comparison. Historic data for algal biomass and its relationship to the analytes associated with the GKM Release Incident are not available; hence, measures of primary productivity and nutrient concentrations will not be included in the EPA's Conceptual Monitoring Plan. However, this comment could be addressed in a State or tribal plan if a more general watershed characterization including trophic status is of interest.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 10 - Recommend oxidation-reduction potential of sediment sampling since the oxidation-reduction potential is a measure of oxidizing or reducing conditions which affect the mobilization of metals bound to sediments.	LP 10- We agree that analysis of redox and TOC assist in predicting the potential availability/toxicity of metals in sediments. However, since redox potential and TOC fluctuate spatially and temporally, it would be more conservative to compare total metals values against benchmarks for estimation of risks. Therefore, to be conservative, we plan to compare total metals concentrations in sediments to applicable benchmarks and assume worst case availability for risk estimation.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 11 - Recommend adding TOC for sediments. (Note: TOC affects chemical and biological processes that occur in sediments. The amount of organic carbon influences the redox potential in sediment which controls the behavior of other chemical species such as metals.)	LP 11- We agree that analysis of redox and TOC assist in predicting the potential availability/toxicity of metals in sediments. However, since redox potential and TOC fluctuate spatially and temporally, it would be more conservative to compare total metals values against benchmarks for estimation of risks. Therefore, to be conservative, we plan to compare total metals concentrations in sediments to applicable benchmarks and assume worst case availability for risk estimation..
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 12 - In order to compare to listed standards, recommend speciation of chromium and radionuclides in both water column and sediments and thallium speciation for sediments. Please review reference standards for specific analytes.	LP 12- Thank you. We will add CrIII, CrVI and strontium. As reflected in the draft plan, we are planning to analyze for uranium and thallium. Please note that radionuclides are not associated with the GKM discharge nor are there sediment standards or screening levels against which to compare them. There is a recreational screening level for thallium; however, it is not speciated so we will not speciate thallium.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 13 - Recommend adding multi-habitat benthic macroinvertebrate sampling collection.	LP 13- Since EPA will be comparing current data to historic datasets, it is important that comparable sampling methods be employed. This may require that we use a range of methods across the watershed. At locations which were sampled in the past as part of EPA's National Rivers and Streams Assessment (NRSA), EPA will employ the sampling procedures used in NRSA to represent multiple habitat types. This method collects macroinvertebrates at 11 equally-spaced transects along the waterbody reach and can be viewed at: http://www2.epa.gov/sites/production/files/2013-11/documents/nrsa_field_manual_4_21_09.pdf
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 14 - Recognize that results from full screening sampling were not available and if additional constituents from the mine site are found they may need to be incorporated into the sampling plan. Develop a procedure for adding constituents and monitoring sites to the Watershed Monitoring Plan, if needed, as more information is developed.	LP 14- Results from screening sampling from the GKM adit have been evaluated and no additional constituents of concern were identified. The updated Conceptual Monitoring Plan lists the analytes that will be monitored under this plan. This plan can be modified during the life of the project as more information becomes available through sampling efforts or review of historic data.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 15 - Recommendation: Collection of flow-paced composite samples, using standard automated sampling unites (i.e. "sippers"), should be considered to collect samples which are more representative of water quality over the duration of the sampling period than grab samples, particularly when flow rates vary over time as a result of runoff from rainfall or snow melt.	LP 15- The use of automated sampling units and discharge-triggered sampling will be investigated/considered especially in regards to sampling during storm events.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 16 - Recommendation: Recommend criteria to extend sampling program based on each media tested, i.e. different duration for water column sampling, sediment sampling, groundwater sampling, benthic organism sampling and fish tissue sampling. Our recommendation is based on no further significant untreated release events in the Upper Animas River Watershed and that normal low flows and high lows are realized during the sampling period. - fish tissue and benthic organisms - 3 to 5 years to allow for different life cycles and movement through species, account for abnormal or variable conditions; Groundwater - 3 to 5 years depending upon aquifer characteristics; sediment - 2 to 3 years to account for variable conditions and mobilization of sediments; water column - 1 to 2 years.	LP 16- After the first year of monitoring under Objective A in the Conceptual Monitoring Plan, data assessment will identify sites that may require further study. For sites requiring further study, water, sediment, and biological monitoring will be extended into the future. Regarding collection of biological data, we strove to provide enough time for the biological communities to show effects while minimizing time and opportunity for confounding factors to also impact those communities. Because biological communities integrate many environmental factors, the further removed in time that monitoring occurs, the more confounded the data will be with respect to the GKM release and the more difficult the data are to interpret. Hence, EPA will determine if additional biological monitoring is necessary subsequent to the fall 2016 event and as informed by EPA's Office of Research and Development's fate and transport modeling designed to predict potential biological impacts of the release. Additionally, States and Tribes have the opportunity to consider additional biological monitoring in their Clean Water Act 106 funded plans.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 17 - Recommendation: See Table 3 attached to this letter for recommended sites for water column, sediment, and benthic organism and fish tissue sampling. Our rationale is based on the availability of historical or pre-release data and other factors not considered in the draft Watershed monitoring Plan for these media. Our recommended sampling sites are also attached to this letter as Figure 1.	LP 17- EPA thanks you for input on sample sites and will consider this information in final site selection.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 18 - Recommendation: A background site on Mineral Creek, M34 at the USGS stream gage, is recommended in addition to site A68 on the Animas River upstream of the Cement Creek confluence.	LP 18- We've added site M34, which was sampled for this fall's sampling event as well.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 19 - Recommendation: Develop locations on fish tissue and fish population collection in coordination with Colorado Parks and Wildlife.	LP 19- Good recommendation, we'll plan to coordinate with CPW.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 20 - Data Assessment hyperlinks to standards are not working - please provide reference standards. Consider adding to the Watershed Monitoring Plan as a set of Appendices, which may need to be updated as reference standards change.	LP 20- We will check the links and better present reference standards.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 21 - In addition to regulations, recommend comparing results to protocols, methodologies and guidance to fully contextualize potential impacts and conclusions (i.e. Colorado 303(d) listing methodology (MMI Index), the report Baseline Ecological Risk Assessment, Upper Animas Mining District, San Juan County, Colorado (biocriteria for metals), basis for water quality standards development, etc.). Provide health based standards or guidance for fish tissue criteria.	LP 21- Please see the final Conceptual Monitoring Plan as additional details describing EPA's anticipated assessment approaches have been included.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 22 - Need to include reference standards for sediments.	LP 22- These will be provided in the final Conceptual Monitoring Plan.

10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 23 - Please provide exposure limits for water column and sediments as developed as part of the Gold King Release (see Recommendation IV.(A)3 above.)	LP 23- These will be provided in the final Conceptual Monitoring Plan.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 24 - Need to include reference standards for other uses including agricultural and industrial uses.	LP 24- We will check the links and better present reference standards.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 25 - Has the groundwater monitoring conducted to date within La Plata County fully characterized the water quality of the Animas River Alluvium in relation to the Gold King Mine Spill? Given the information know on well proximity, hydraulic conductivity, plumping rates, well drilling logs and ditches that continued to divert water during the release, what additional sampling is proposed for the spill response and why?	LP 25- Sampling of ground water/wells was not included in the draft Conceptual Monitoring Plan (CMP). Recognizing continued interest, EPA took comment and input on whether further action is needed. The EPA asked for stakeholder input on the frequency, duration, location and scientific basis for continuing sampling of wells. We are considering the detailed information provided by your organization and may be in touch to discuss this further before determining how to proceed with addressing groundwater. Also to help determine the best approach for groundwater monitoring, EPA's Office of Research and Development is undertaking a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with potential biological and groundwater impacts. This information will help guide Agency decisions associated with groundwater/well sampling, will be communicated to the public in the near future, and will be addressed under separate cover. In addition, EPA is providing Clean Water Act Section 106 funds to States/Tribes to develop monitoring plans to meet their specific goals and encourage inclusion of groundwater/well water sampling of importance to them in these plans as well.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 26 - Given the data collected to date, what information is available regarding pre-release alluvial groundwater quality and post-release groundwater quality? Groundwater data collected per Colorado Oil and Gas Conservation Commission rules and regulations. In addition, groundwater quality collected for New Source Approval for groundwater wells serving public water systems could also be used for background data development. How does EPA propose to determine the impacts of the release to alluvial groundwater?	LP 26- Currently, the Agency is assembling historic data for the watershed. We appreciate the additional information related to potential sources of historic groundwater data and will consider these. Sampling of ground water/wells was not included in the draft Conceptual Monitoring Plan (CMP). Recognizing continued interest, EPA took comment and input on whether further action is needed. The EPA asked for stakeholder input on the frequency, duration, location and scientific basis for continuing sampling of wells. We are considering the detailed information provided by your organization and may be in touch to discuss this further before determining how to proceed with addressing groundwater. Also to help determine the best approach for groundwater monitoring, EPA's Office of Research and Development is undertaking a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with potential biological and groundwater impacts. This information will help guide Agency decisions associated with groundwater/well sampling, will be communicated to the public in the near future, and will be addressed under separate cover. In addition, EPA is providing Clean Water Act Section 106 funds to States/Tribes to develop monitoring plans to meet their specific goals and encourage inclusion of groundwater/well water sampling of importance to them in these plans as well. B
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 27- What are the anticipated relationships between the Animas River and associated irrigation ditches' surface water and adjoining sediments and alluvial groundwater quality?	LP 27- EPA's Office of Research and Development is undertaking a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with potential biological and groundwater impacts. This modeling effort considers surface waters and their relationship to groundwater. This information will help guide Agency decisions associated with groundwater/well sampling, will be communicated to the public in the near future, and will be addressed under separate cover. We encourage States/Tribes/stakeholder to consider addition of groundwater/well sampling in their own Clean Water Act Section 106 plans for which the Agency is providing funding in 2016.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 28- What is EPA's proposal for long term monitoring of the alluvial groundwater to assess long term impacts to alluvial groundwater from the Gold King Spill? We are concerned that point sampling could miss a plume signal if it is taken to early or too late.	LP 28- EPA's Office of Research and Development is undertaking a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with potential biological and groundwater impacts. This modeling effort considers surface waters and their relationship to groundwater. This information will help guide Agency decisions associated with groundwater/well sampling, will be communicated to the public in the near future, and will be addressed under separate cover. We encourage States/Tribes/stakeholder to consider addition of groundwater/well sampling in their own Clean Water Act Section 106 plans for which the Agency is providing funding in 2016.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 29- Recommendation: the sampling plan should include both "Sentinel Wells," located between sites of identified contamination and ground water wells that serve public and private houses, and groundwater wells identified with high levels of Lead, Arsenic, Copper, Iron and Manganese.	LP 29- We will consider this information when determining the Agency approach to addressing groundwater/well sampling. EPA's Office of Research and Development is undertaking a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with potential biological and groundwater impacts. This modeling effort considers surface waters and their relationship to groundwater. This information will help guide Agency decisions associated with groundwater/well sampling, will be communicated to the public in the near future, and will be addressed under separate cover. We encourage States/Tribes/stakeholder to consider addition of groundwater/well sampling in their own Clean Water Act Section 106 plans for which the Agency is providing funding in 2016.
10/7/2015	Comment mailbox	La Plata- Joseph Kerby	LP 30- Recommendation: We recommend quarterly monitoring of the groundwater sources and post-treatment water quality.	LP 30- We will consider this information when determining the Agency approach to addressing groundwater/well sampling. EPA's Office of Research and Development is undertaking a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with potential biological and groundwater impacts. This modeling effort considers surface waters and their relationship to groundwater. This information will help guide Agency decisions associated with groundwater/well sampling, will be communicated to the public in the near future, and will be addressed under separate cover. We encourage States/Tribes/stakeholder to consider addition of groundwater/well sampling in their own Clean Water Act Section 106 plans for which the Agency is providing funding in 2016.
10/22/2015	Email to Michael Montgomery from Eric Rich	Navajo Nation - Eric Rich	NN14- We have reviewed the EPA Draft September 2015 Conceptual Monitoring Plan for Surface Water, Sediments, and Biology for monitoring the San Juan on the Navajo Nation and have additional comments to those made previously. When USEPA is sampling San Juan River water on the Navajo Nation we request that USEPA follow the attached Navajo Nation EPA Quality Assurance Plan (NNEPA QAP). Please review the attached NNEPA QAP and make changes to the Conceptual Monitoring Plan as needed.	NN14- Per Agency requirements, EPA must prepare a QAPP that meets the objectives of this Conceptual Monitoring Plan to guide field activities. This QAPP will be made available for your information and we anticipate that this QAPP will be similar to that of NNEPA. To the extent possible, we will collect data under this QAPP that are suitable for use by the Navajo Nation. EPA will also provide Clean Water Act 106 funds for States and Tribes to complete activities under Objective B per their own plans and these data may be collected in accordance with established tribal/State QA planning documents.
10/22/2015	Email to Michael Montgomery from Eric Rich	Navajo Nation - Eric Rich	NN15- Please note that the Navajo Nation has a chronic numeric mercury standard for the Aquatic and Wildlife Habitat designated use which requires the use of USEPA mercury Method 1631 and the corresponding data collection technique known as “clean hands, dirty hands”. USEPA Method 245.1 will not provide a detection level to compare to the mercury standard.	NN15- EPA will identify method 1631 be used in the collection and analysis of mercury in water.
10/22/2015	Email to Michael Montgomery from Eric Rich	Navajo Nation - Eric Rich	NN16- When comparing your San Juan River water quality data collected on the Navajo Nation to water quality criteria, please use our current 2007 Navajo Nation Surface Water Quality Standards (NNSWQS) which are attached as well. We are in the process of revising these standards and have a Draft 2015 NNSWQS (also attached) which will be public noticed soon.	NN16- Thank you. We will use the Navajo Nation (NN) Surface Water Quality Standards for condition assessments in NN jurisdiction.
10/22/2015	Email to Michael Montgomery from Eric Rich	Navajo Nation - Eric Rich	NN17- In Section X (Data Assessment) of the Conceptual Plan, USEPA describes State and tribal assessment methods to consider. Attached is our assessment method to determine impairment.	NN17- Thank you.
10/22/2015	Email to Michael Montgomery from Eric Rich	Navajo Nation - Eric Rich	NN18- Please note that all of the attached documents may vary substantially from those of States and other Tribes. As previously mentioned we request that the attached documents be reviewed and considered in modifying the Conceptual Monitoring Plan for water quality data obtained from the San Juan River on the Navajo Nation.	NN18- Thank you.
10/22/2015	Email to Michael Montgomery from Eric Rich	Navajo Nation - Eric Rich	NN19- Please note that we may have more comments in the future as the USEPA Conceptual Monitoring Plan is revised.	NN19- Comment noted.

10/8/2015	Comment mailbox	Navajo Nation - Ethel Branch	NN 1- First, for the stretch of the San Juan River that courses through the Navajo Nation, we ask that the United States Environmental Protection Agency (USEPA) provide funding preference to the long-term studies relating to the Gold King Mine Spill (GKM Spill or Spill) being developed by the Navajo Nation. In addition to sediment and water quality, the Nation's studies will include impacts to human health—a critical dimension that aligns with USEPA's mission of protecting both human health and the environment. We do not yet know the full extent of harm that has been or will be caused by the GKM Spill. Our planned multi-dimensional studies are critical to the Nation understanding those impacts. We wish to be aware of the Spill's effects, as well as the effects of historic and ongoing upstream releases, so that we can remediate and protect against them. We thus reiterate our request that USEPA fund the long-term studies to be conducted or overseen by our technical experts.	NN 1- US EPA is planning to provide additional Clean Water Act 106 funds for the Navajo Nation to conduct sampling along the San Juan River. The Navajo Nation may utilize its own technical experts to sample and gather data. In addition, annual 106 funds provided to the Navajo Nation could be used to monitor the San Juan River in subsequent years. Also, EPA and its contractors would like to sample all Objective A sites and parameters under this Conceptual Monitoring Plan, this information may be used to supplement those data collected under the Navajo Nation's plan for your own purposes as well.
10/8/2015	Comment mailbox	Navajo Nation - Ethel Branch	NN 2- Second, we repeat our request made to Administrator McCarthy and Governor Hickenlooper by letter dated September 7, 2015 that USEPA list the Upper Animas Mining District (District) on the CERCLA National Priorities List so that prompt action may be taken to address and contain the long-standing risks to human health and the environment posed by the historic mining and processing activities in the District. The "Post-Gold King Mine Release Incident: Conceptual Monitoring Plan for Surface Water, Sediments and Biology" (CMP) should be broadened in scope and designed to lay the groundwork for this process.	NN 2- Listing of the Upper Animas on the National Priority List is under consideration and additional focused monitoring efforts under EPA's Superfund Program are planned to address the needs expressed in this comment Hence, the scope of this Conceptual Monitoring Plan will remain focused on evaluating changes in the watershed since the GKM release incident.
10/8/2015	Comment mailbox	Navajo Nation - Ethel Branch	NN 3- In current form, the Conceptual Monitoring Plan is inadequate in scope. It only contemplates monitoring the affected watershed for one year, it proposes an exceptionally narrow sampling and monitoring schedule, and it excludes important sampling sites that are to understanding the impacts of the Spill.	NN 3- Several of the comments received on the first draft of the Conceptual Monitoring Plan (CMP) requested an expansion of scope for the plan through addition of analytes, study objectives, sampling locations, and study duration. In response, EPA has decided to provide Clean Water Act 106 funds to Tribes/States to develop and implement their own plans to supplement the monitoring to be carried out by EPA under this plan. In this way, EPA is providing the opportunity for the scope expansion through Tribal/State plans. EPA will focus the Agency's CMP on comparison of pre-post spill conditions in order to evaluate changes since the GKM Release Incident (duration of the monitoring will be determined after review/assessment of data collected over one year). Tribes and States may develop monitoring plans that address broader priories not captured by EPA's plan.
10/8/2015	Comment mailbox	Navajo Nation - Ethel Branch	NN 4- Table I only proposes four sampling events for water column testing, three sampling events for sediment testing, one sampling event for benthos and fish tissue, two sampling events for biological community, and as few as two stormwater sampling events. Flow data will only be taken during sampling events. These few data points are inadequate to develop a pool of data sufficient to assess whether water and sediment quality trends at specific sampling sites are similar to trends observed before the GKM Spill. Samples should be taken during each season for each of sample, and enough samples should be taken during each season (no less than once monthly) to provide data sufficient to isolate outliers and create a data pool that can provide assurances of test results. This can assist in identifying more heavily impacted sites, which may prompt additional focused study of those specific sites. At a minimum, sediment sampling of municipal, industrial and irrigation intakes should occur in the summer, and irrigation canals sediments should be sampled before irrigation and during irrigation. Irrigation canal water should be sampled during irrigation season.	NN 4- We appreciate the desire for additional sample collection. In response, EPA plans to provide Clean Water Act 106 funds to States and Tribes for expansion of monitoring under their own plans. Tribes and States may chose to expand the scope and frequency of monitoring and thus provide a greater pool of data for assessment. For Objective A to be carried out under EPA's Conceptual Monitoring Plan, EPA believes the sampling sites and schedule proposed in the Conceptual Monitoring Plan are adequate to assess if the Animas and San Juan Rivers have returned to pre-spill conditions. Also, the sampling frequency for each parameter differs based on expected response time to changes for that parameter. For example, biological condition responses reflect effects that are integrated over time so less frequent monitoring is appropriate Since irrigation canal sampling is not within the scope of the Conceptual Monitoring Plan's Objective A, the Navajo Nation may consider doing so as part of its Clean Water Act monitoring plan. In addition to flow data at the time of sampling, USGS real-time flow gage data are also available throughout the watershed at: CC48, A68, M34, A72, A75D, Animas-Rotary Park, GKM05, AR19-3, ADW-010, FW-040, SJLP, SJSR, SJ4C, SJBB. Finally, the modeling effort being carried out by EPA's office of Research and Development will provide valuable fate and transport information to support prediction of water, sediment, and biological impacts in the watershed.
10/8/2015	Comment mailbox	Navajo Nation - Ethel Branch	NN 5- We appreciate USEPA's attempt to compare pre- and post-GKNI Spill data by taking future samples at locations where data has already been collected as described in Assessment Objective A. However, we challenge USEPA to expand its sampling locations beyond those sites to include locations where sediments released in the GKM Spill are most likely to settle, or are most likely to be disturbed. This will assist in identifying high-risk locations along the river system, and will assist in developing data to help identify the character of the river system post-GKM Spill. As USEPA has Stated, we will be dealing with the effects of this Spill for decades, so the development of new data to track the character of the river system at its most telling locations will be critical in assisting communities in protecting themselves from future and ongoing toxic levels of heavy metals exposure, whether in sediment or in solution.	NN 5- We appreciate the desire for additional sample locations. In response, EPA plans to provide Clean Water Act 106 funds to States and Tribes for expansion of monitoring activities under their own plans. Tribes and States may chose to expand the scope of monitoring sites to determine baseline conditions in the watershed. For Objective A to be carried out under EPA's Conceptual Monitoring Plan, EPA believes the sampling sites and schedule proposed in the Conceptual Monitoring Plan are adequate to assess if the Animas and San Juan Rivers have returned to pre-spill conditions. In addition, the US EPA Office of Research and Development (ORD) has undertaken a modeling effort to determine the fate and transport of the sediments from the GKM spill. If additional sampling stations are warranted based on the ORD assessment, we may consider changing or adding sediment sampling sites as well.
10/8/2015	Comment mailbox	Navajo Nation - Ethel Branch	NN 6- We also challenge USEPA to develop pre-spill baseline data for new sampling sites to be studied. This can be done through the use of forensic sampling techniques, and is critical to advancing an understanding of how the Spill affected the new sampling sites. This too will assist in anticipating the effects of future spill events.	NN 6- To the extent possible, EPA will use existing pre-spill datasets to develop baseline conditions. Based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts that may to include a broader array of media, analytes, sampling locations, and frequencies. If the Navajo Nation would like to consider additional baseline data with new sampling sites, EPA will work with the Navajo Nation to help identify additional sites to be sampled under a Clean Water Act 106 plan.
10/8/2015	Comment mailbox	Navajo Nation - Ethel Branch	NN 6.5- It is our understanding that global climate change is causing increasing variability in weather conditions, and that the recent drought in the southwestern United States may be related to these effects. Thus one year may not provide sufficient information to compare pre- and post-GKM Spill conditions, nor to assess the true character of the river system post-Spill. Additionally, one year will be inadequate to assess the impacts of ongoing mine drainage from the District. We therefore request a decade-long timeframe for the Conceptual Monitoring Plan.	NN 6.5- After the first year of monitoring under Objective A in the Conceptual Monitoring Plan, data assessment will identify sites that may require further study. For sites requiring further study, water, sediment, and biological monitoring will be extended into the future. Hence, EPA will determine if additional monitoring is necessary subsequent to the fall 2016 event and as informed by EPA's Office of Research and Development's fate and transport modeling designed to predict potential impacts of the release. Additionally, States and Tribes have the opportunity to consider additional monitoring in their Clean Water Act 106 funded plans. While the monitoring described in this plan will integrate any effects of climate change that occur over its duration, it has not been designed to identify the specific effects of climate change.
10/8/2015	Comment mailbox	Navajo Nation - Ethel Branch	NN 7- For sampling sites listed in Table 2, we ask that USEPA include the Hogback Intake along the San Juan River.	NN 7- The hogback intake does not appear to have historic data available and therefore is outside of the scope of Objective A to be carried out under this Conceptual Monitoring Plan. EPA plans to provide Clean Water Act 106 funds to States and Tribes for expansion of monitoring activities under their own plans. Hence, if no historic data are available for the Hogback site, the Navajo Nation may want to consider sampling this site under a Clean Water Act 106 plan.
10/8/2015	Comment mailbox	Navajo Nation - Ethel Branch	NN 8-For all sites along the San Juan River we request that USEPA coordinate sampling locations with Navajo Nation EPA and U.S. Bureau of Reclamation.	NN 8- EPA will coordinate Objective A site selection with partners.
10/8/2015	Comment mailbox	Navajo Nation - Ethel Branch	NN 9-The Conceptual Monitoring Plan objective to understand "whether typical conditions in this watershed are being maintained after the GKM release" is flawed because the "typical conditions" prior to the Gold King Mine Release were and are unacceptable. USEPA's goal should be to restore this watershed to pre-mining conditions, not pre-GKM Spill conditions. While "Section II, Context" States that "conditions in many areas of this watershed pre-GKM Spill are not pristine nor free of impairment," that is not a free pass for USEPA to avoid taking responsibility for restoring the watershed to safe and healthy conditions. The devastating GKM Spill was not the first incident of its kind, and it is unlikely to be the last. Downstream users have a right to the down flow of water that meets their applicable water quality standards. USEPA should fulfill its mission to protect human health and the environment in the San Juan River Basin, just as it seeks to do so elsewhere. Accordingly, a study of the watershed should not only assess the impacts of the singular GKM Spill release, but should also evaluate the likelihood of future releases from the District and the surrounding area, as well as the impact of the ongoing acid mine drainage from the historic mining and processing sites in the area. Sampling and analysis of continued contamination from the many sources in the District would assist in this analysis, as would a robust study of the Animas River conditions upstream from these mining impacts.	NN 9- Thank you. Several of the comments received on the first draft of the Conceptual Monitoring Plan (CMP) requested an expansion of scope for the plan through addition of analytes, study objectives, sampling locations, and study duration. In response, EPA has decided to provide Clean Water Act 106 funds to Tribes/States to develop and implement their own plans to supplement the monitoring to be carried out by EPA under this plan. In this way, EPA is providing the opportunity for the scope expansion through Tribal/State plans. EPA will focus the Agency's Conceptual Monitoring Plan on comparison of pre-post spill conditions in order to evaluate changes since the GKM Release Incident. Tribes and States may develop monitoring plans that address broader priories not captured by EPA's plan.
10/8/2015	Comment mailbox	Navajo Nation - Ethel Branch	NN 10- The Conceptual Monitoring Plan seeks to study the conditions of biological communities, including fish. We ask that native fish species be included in the scope of this study.	NN 10- We will use whatever historic method was used in order to ensure comparability. At two sites on the San Juan along the border with the Navajo Nation, we will use the NRSA method. The NRSA method is designed to sample whatever fish types are present at the study sites. The method does not exclude native species. It targets a representative assemblage of all species present.

10/8/2015	Comment mailbox	Navajo Nation - Ethel Branch	NN 11-Page 2: "Currently, sampling of drinking water wells is not included in this plan. Recognizing continued interest, EPA is taking comment and input on whether further action is needed on private wells. The EPA would like stakeholder input on the frequency, duration, location and scientific basis for continuing sampling of private wells." Comment: The EPA should have a plan to address or assist drinking water wells. The regularly scheduled sampling schedule for drinking water wells may not be sufficient to assess potential impacts.	NN 11-Page 2: We will consider this information when determining the Agency approach to addressing groundwater/well sampling. EPA's Office of Research and Development is undertaking a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with potential biological and groundwater impacts. This modeling effort considers surface waters and their relationship to groundwater. This information will help guide Agency decisions associated with groundwater/well sampling, will be communicated to the public in the near future, and will be addressed under separate cover. We encourage States/Tribes to consider addition of groundwater/well sampling in their own Clean Water Act Section 106 plans for which the Agency is providing funding in 2016.
10/8/2015	Comment mailbox	Navajo Nation - Ethel Branch	NN 12- Page 2: "This monitoring and associated assessment will not constitute characterization for the Clean Water Act (Clean Water Act) Section 303(d) and 305(b) assessment determinations or site assessment/remedial investigation purposes under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); however, these data may support such efforts." Comment: The monitoring plan should identify what data gaps exist to fulfill these purposes so the entities may supplement the monitoring effort and data acquisition to meet the criteria for Clean Water Act (Clean Water Act) Section 303(d) and 305(b) assessment determinations or site assessment/remedial investigation purposes under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).	NN 12- Page 2 - EPA will provide Clean Water Act 106 funds so that Tribes and States may collect additional data for their own assessment purposes. Assessments for 303(d) and 305(b) purposes are dependent on each Tribe and State assessment methodologies. Data collected through the efforts under the EPA's Conceptual Monitoring Plan may supplement the Tribe or State datasets and could be used for 303(d) and 305(b) assessments. That decision will be left to each Tribe and State since assessment methods and requirements are unique to each. Similarly, the data collected under the Conceptual Monitoring Plan will supplement additional data needed for site assessment/remedial investigation purposes.
10/8/2015	Comment mailbox	Navajo Nation - Ethel Branch	NN 13- Page 4: "Due to the discrepancy of available pre-release and historic data and potential challenges faced by downstream States in assessing pre-release/historic trends with post-release conditions, two objectives for this study are proposed: Objective A: Identify changes in surface water or sediment quality trends since the GKM Release Incident in Cement Creek, Animas River, and the San Juan River by comparing post-release data against pre-release or historic trends. Only data that meet the requirements of Objective A, in that pre-release and post-release comparisons can be made, will be used to assess the changes since the GKM Release Incident. Objective B: Assess only current conditions of Cement Creek, Animas River, San Juan River, and Lake Powell where historic or pre-release data are absent or limited. Data solely collected to meet Objective B will not be sufficient in assessing the changes since the GKM Release Incident without additional information.' Comment: Will there be an assessment of the responses by all agencies from the time of the spill to the generation of this monitoring plan as well as the objectives/results of those responses?	NN 13- Page 4: Thank you for this question. As it pertains to actions outside of this Conceptual Monitoring Plan; we have referred it to our Office of Communications and Public Involvement to be addressed.
9/22/2015	Email	New Mexico	NM 1- It does not appear to acknowledge that much higher concentrations of contaminants and sediment exist in Colorado and over likely many years of storm events and spring run off this will migrate to NM and other downstream States. This may accumulate in NM farming soils and low flow areas in the river. Limiting it to only one year of monitoring may not be sufficient.	NM 1- The Conceptual Monitoring Plan proposes to monitor sediment quality at 13 locations upstream of NM over at least one-year. This will provide data to determine if sediment quality in those areas has changed since GKM Release Incident and if migration of sediments from these locations will pose a risk that is greater than experienced in the past for down stream reaches of the watershed. The plan leaves room for extending the plan duration after a review of the first year's monitoring results. EPA will discuss any further monitoring needs with impacted States and Tribes following the initial year of monitoring. Hence, EPA will determine if additional monitoring is necessary subsequent to the fall 2016 event and as informed by EPA's Office of Research and Development's fate and transport modeling designed to predict potential biological impacts of the release. Additionally, States and Tribes have the opportunity to consider additional monitoring in their Clean Water Act 106 funded plans
9/22/2015	Email	New Mexico	NM 2- No monitoring of heavy metals in irrigated croplands is proposed.	NM 2- Several of the comments received on the first draft of the Conceptual Monitoring Plan (CMP) requested an expansion of scope for the plan through addition of media, analytes, study objectives, sampling locations, and study duration. In response, EPA has decided to provide Clean Water Act 106 funds to Tribes/States to develop and implement their own plans to supplement the monitoring to be carried out by EPA under this plan. In this way, EPA is providing the opportunity for the scope expansion through Tribal/State plans. EPA will focus the Agency's CMP on comparison of pre-post spill conditions in order to evaluate changes since the GKM Release Incident (duration of the monitoring will be determined after review/assessment of data collected over one year). Tribes and States may develop monitoring plans that address broader priories not captured by EPA's plan.
9/22/2015	Email	New Mexico	NM 3- No monitoring of crops and livestock is proposed.	NM 3- Several of the comments received on the first draft of the Conceptual Monitoring Plan (CMP) requested an expansion of scope for the plan through addition of media, analytes, study objectives, sampling locations, and study duration. In response, EPA has decided to provide Clean Water Act 106 funds to Tribes/States to develop and implement their own plans to supplement the monitoring to be carried out by EPA under this plan. In this way, EPA is providing the opportunity for the scope expansion through Tribal/State plans. EPA will focus the Agency's CMP on comparison of pre-post spill conditions in order to evaluate changes since the GKM Release Incident (duration of the monitoring will be determined after review/assessment of data collected over one year). Tribes and States may develop monitoring plans that address broader priories not captured by EPA's plan.
9/22/2015	Email	New Mexico	NM 4- Biological impacts usually require longer term monitoring so again, limiting to 1 year is likely not adequate.	NM 4- We are planning to collect data for at least one year to cover all seasonal flow conditions in the watershed. The plan allows for future site specific sampling based on results after 1 year (sampling can be extended into the future) for water, sediment, and biological monitoring. Regarding collection of biological data, we strove to provide enough time for the biological communities to show effects while minimizing time and opportunity for confounding factors to also impact those communities. Because biological communities integrate many environmental factors, the further removed in time that monitoring occurs, the more confounded the data will be with respect to the GKM release and the more difficult the data are to interpret. Hence, EPA will determine if additional biological monitoring is necessary based on data assessment subsequent to the fall 2016 sampling event and as informed by EPA's Office of Research and Development's fate and transport modeling designed to predict potential biological impacts of the release. Additionally, States and Tribes have the opportunity to consider additional biological monitoring in their Clean Water Act 106 funded plans.
9/22/2015	Email	New Mexico	NM 5- Public water supply wells should be included to determine any impacts that may occur over time and the associated sludge sampling for disposal by the systems (we have included this in the NMED plan)	NM 5- We will consider this information when determining the Agency approach to addressing groundwater/well sampling. EPA's Office of Research and Development is undertaking a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with potential biological and groundwater impacts. This modeling effort considers surface waters and their relationship to groundwater. This information will help guide Agency decisions associated with groundwater/well sampling, will be communicated to the public in the near future, and will be addressed under separate cover. We encourage States/Tribes to consider addition of groundwater/well sampling in their own Clean Water Act Section 106 plans for which the Agency is providing funding in 2016.
9/22/2015	Email	New Mexico	NM 6- No groundwater monitoring was mentioned in the plan. We were aware of this and in discussions EPA asked us how much this would cost and that they "might" be able to get us superfund money for this. We believe GW sampling private wells semi-annual/seasonal/quarterly follow up sampling is a good idea. Our plan will address this.	NM 6- We will consider this information when determining the Agency approach to addressing groundwater/well sampling. EPA's Office of Research and Development is undertaking a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with potential biological and groundwater impacts. This modeling effort considers surface waters and their relationship to groundwater. This information will help guide Agency decisions associated with groundwater/well sampling, will be communicated to the public in the near future, and will be addressed under separate cover. We encourage States/Tribes to consider addition of groundwater/well sampling in their own Clean Water Act Section 106 plans for which the Agency is providing funding in 2016.

9/21/2015	Email	New Mexico - Ryan Flynn - Secretary of Environment	NM 7- The State of New Mexico does not believe it is appropriate for EPA to lead monitoring effort regarding the impacts of the Gold King Mine Release. As the responsible party, there is a clear conflict of interest. The State of New Mexico would never allow a party responsible for creating an environmental disaster to monitor itself. As we have indicated to EPA numerous times over the past few weeks, we believe the most productive path forward is for EPA to fund the long term monitoring plan the State is currently developing with local government agencies, public universities and non-governmental organizations. We believe a locally-driven monitoring plan is the best path forward and will be happy to discuss this with you in more detail at your earliest convenience.	NM 7- The Gold King Mine release was a tragic and unfortunate incident, and the EPA has taken responsibility to ensure that it is cleaned up appropriately. The EPA's core mission is to ensure a clean environment and protect public health, and we are dedicated to continuing to do our job to protect the environment and to hold ourselves to the same high standard we demand from others. We will continue to coordinate with New Mexico and other State/Local/Tribal entities as we move forward in collecting information in the watershed to address Objective A in the Conceptual Monitoring Plan. However, in response to your comment and those of other stakeholders requesting more flexibility in sampling efforts across jurisdictions, the EPA is planning to provide additional Clean Water Act 106 funds for the New Mexico to conduct sampling along the San Juan River. Also, EPA and its contractors would like to sample all Objective A sites and parameters under this Conceptual Monitoring Plan, this information may be used to supplement those data collected under New Mexico's plan for your own purposes as well.
10/7/2015	Comment mailbox	New Mexico Department of Health - Miriam Wamsley	NM DOH 1 - In my opinion, the State of New Mexico has developed a long-term monitoring plan that is superior to this plan. The EPA should defer to the State plans.	NM DOH 1 - In response to your comment and those of other stakeholders requesting State/tribal directed sampling efforts, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. In addition, annual 106 funds provided to States/Tribes may be used to monitor the watershed.
10/8/2015	Comment mailbox	NPS - Stephen Monroe	NPS 1- The Draft Conceptual Monitoring Plan is heavily based on use of historical data to assess potential effects of the GKM release. However, since there is relatively little historical data available for reaches of the Animas and San Juan Rivers in New Mexico an alternative investigation plan should be developed. We suggest adding the following measure to address this shortcoming. - Implementation of strategies designed to identify the chemical signature of the GKM release. For example, use of isotopic fingerprinting, sediment coring, and careful evaluation of available historical data could be used to distinguish between pre and post release conditions.	NPS 1- Several of the comments received on the first draft of the Conceptual Monitoring Plan (CMP) requested an expansion of scope for the plan through addition of media, analytes, study objectives, sampling locations, and study duration. In response, EPA has decided to provide Clean Water Act 106 funds to Tribes/States to develop and implement their own plans to supplement the monitoring to be carried out by EPA under this plan. In this way, EPA is providing the opportunity for the scope expansion through Tribal/State plans. EPA will focus the Agency's CMP on comparison of pre-post spill conditions in order to evaluate changes since the GKM Release Incident (duration of the monitoring will be determined after review/assessment of data collected over one year). Tribes and States may develop monitoring plans that address broader priories not captured by EPA's plan.
10/8/2015	Comment mailbox	NPS - Stephen Monroe	NPS 2- Sample Sites The Draft Conceptual Monitoring Plan does not identify plans to collect samples at wells or from irrigation ditches. Both of these may have been impacted by the GKM release and we recommend they are added.	NPS 2- Sampling of ground water/wells was not included in the draft Conceptual Monitoring Plan. Recognizing continued interest, EPA took comment and input on whether further action is needed. The EPA asked for stakeholder input on the frequency, duration, location and scientific basis for continuing sampling of wells. Some information from stakeholders was provided and is under consideration but varied across jurisdiction. EPA's Office of Research and Development is undertaking a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with potential biological and groundwater impacts. This modeling effort considers surface waters and their relationship to groundwater. This information will help guide Agency decisions associated with groundwater/well sampling, will be communicated to the public in the near future, and will be addressed under separate cover. We encourage States/Tribes to consider addition of irrigation ditch and groundwater/well sampling in their own Clean Water Act Section 106 plans for which the Agency is providing funding in 2016.
10/8/2015	Comment mailbox	NPS - Stephen Monroe	NPS 3- Large volumes of GKM release sediments are currently stored in low gradient reaches of the Animas River upstream from the Colorado-New Mexico State line. Runoff events during the next few years will mobilize these sediments, distributing through the river system. We feel the number of runoff event and sediment samples identified in EPA's Conceptual Monitoring Plan is not sufficient to characterize movement of contaminants. We recommend higher frequency sample collection and use of integrated samplers such as a MiniSipper.	NPS 3- MiniSippers will be considered as requested to capture storm event data. Regarding the frequency of storm event sampling, we understand the desire to increase the frequency of sampling during these events; however, we anticipate that it will be difficult to mobilize sampling crews in response to storm events in this large watershed to capture representative samples. We anticipate completing two events and States and Tribes may consider including additional storm event monitoring in their Clean Water Act Objective B monitoring plans. To supplement our understanding of contaminant and sediment transport in this watershed, EPA's Office of Research and Development is undertaking a fate and transport modeling effort designed to predict water and sediment impacts throughout the watershed. This model along with sample collection will support our understanding of fate and transport in this system.
10/8/2015	Comment mailbox	NPS - Stephen Monroe	NPS 4- Due to the inter and intra annual range of variability in hydrologic systems it is difficult to assess trends with data representing only one year. This is particularly true when limited historical data are available. We recommend a post-GKM monitoring period of five years for surface water, sediments, benthic macroinvertebrates, and fish.	NPS 4- We are planning to collect data for at least one year to cover all seasonal flow conditions in the watershed. The plan allows for future site specific sampling based on results after 1 year (sampling can be extended into the future) for water, sediment, and biological monitoring. EPA will determine if additional monitoring is necessary based on data assessment subsequent to the fall 2016 sampling event and as informed by EPA's Office of Research and Development's fate and transport modeling designed to predict potential impacts of the release. Additionally, States and Tribes have the opportunity to consider additional monitoring in their Clean Water Act 106 funded plans.
10/8/2015	Comment mailbox	NPS - Stephen Monroe	NPS 5- For complete water quality general parameters, recommend adding total suspended solids, total dissolved solids and alkalinity.	NPS 5- We have added TSS and alkalinity. We are measuring specific conductance, which closely approximates TDS. Historic TDS data are not available and there are no water quality standards against which to compare TDS data so we will not add TDS.
10/8/2015	Comment mailbox	NPS - Stephen Monroe	NPS 6- Recommend adding nutrients including: total phosphorus, total nitrogen, nitrite, nitrate and ammonia to water column sampling.	NPS 6- Based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. States/Tribes may develop and implement their own plans to include a broader array of analytes, sampling locations, and frequencies etc. EPA's final Conceptual Monitoring Plan will be modified to focus solely on Objective A as drafted and EPA and its contractors will plan to sample Objective A sites and parameters. In determining if this comment applies to Objective A and should be added to EPA's Conceptual Monitoring Plan, we considered if the suggested analytes are associated with the GKM Release Incident. Though these analytes may provide an indication of the potential redox condition in sediments and the water column that could affect metals availability, they are not directly associated with the GKM release. To be conservative, we will use total metals concentrations in water and sediment to compare against benchmarks to estimate risk rather than estimating metals availability. Hence, an understanding of redox conditions is not required for our assessment. However, this comment could be addressed in a State or tribal plan if a more general watershed characterization including trophic status is of interest.
10/8/2015	Comment mailbox	NPS - Stephen Monroe	NPS 7- Recommend adding total phosphorus and total nitrogen to sediment sampling.	NPS 7- Based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. States/Tribes may develop and implement their own plans to include a broader array of analytes, sampling locations, and frequencies etc. EPA's final Conceptual Monitoring Plan will be modified to focus solely on Objective A as drafted and EPA and its contractors will plan to sample Objective A sites and parameters. In determining if this comment applies to Objective A and should be added to EPA's Conceptual Monitoring Plan, we considered if the suggested analytes are associated with the GKM Release Incident. Though these analytes may provide an indication of the potential redox condition in sediments and the water column that could affect metals availability, they are not directly associated with the GKM release. To be conservative, we will use total metals concentrations in water and sediment to compare against benchmarks to estimate risk rather than estimating metals availability. Hence, an understanding of redox conditions is not required for our assessment. However, this comment could be addressed in a State or tribal plan if a more general watershed characterization including trophic status is of interest.
10/8/2015	Comment mailbox	NPS - Stephen Monroe	NPS 8- Recommend adding Chlorophyll-a (algae) and periphyton biomass for water column sampling.	NPS 8- Based on stakeholder feedback, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. States/Tribes may develop and implement their own plans to include a broader array of analytes, sampling locations, and frequencies etc. EPA's final Conceptual Monitoring Plan will be modified to focus solely on Objective A as drafted and EPA and its contractors will plan to sample Objective A sites and parameters. In determining if this comment applies to Objective A and should be added to EPA's Conceptual Monitoring Plan, we considered if the suggested analytes are associated with the GKM Release Incident and if historic data are available for comparison. Historic data for algal biomass and its relationship to the analytes associated with the GKM Release Incident are not available; hence, measures of primary productivity and nutrient concentrations will not be included in the EPA's Conceptual Monitoring Plan. However, this comment could be addressed in a State or tribal plan if a more general watershed characterization including trophic status is of interest.

10/8/2015	Comment mailbox	NPS - Stephen Monroe	NPS 9- Recommend oxidation-reduction potential of sediment sampling.	NPS 9-We agree that analysis of redox and TOC assist in predicting the potential availability/toxicity of metals in sediments. However, since redox potential and TOC fluctuate spatially and temporally, it would be more conservative to compare total metals values against benchmarks for estimation of risks. Therefore, to be conservative, we plan to compare total metals concentrations in sediments to applicable benchmarks and assume worst case availability for risk estimation.
10/8/2015	Comment mailbox	NPS - Stephen Monroe	NPS 10- Recommend adding total organic carbon from sediments.	NPS 10- We agree that analysis of redox and TOC assist in predicting the potential availability/toxicity of metals in sediments. However, since redox potential and TOC fluctuate spatially and temporally, it would be more conservative to compare total metals values against benchmarks for estimation of risks. Therefore, to be conservative, we plan to compare total metals concentrations in sediments to applicable benchmarks and assume worst case availability for risk estimation.
10/8/2015	Comment mailbox	NPS - Stephen Monroe	NPS 11- In order to compare to listed standards, recommend speciation of chromium and radio chemicals in both water column and sediments and thallium speciation for sediments. Please review reference standards for specific analytes.	NPS 11- Thank you. We will add CrIII, CrVI and strontium. As reflected in the draft plan, we are planning to analyze for uranium and thallium. Please note that radionuclides are not associated with the GKM discharge nor are there sediment standards or screening levels against which to compare them. There is a recreational screening level for thallium; however, it is not speciated so we have chosen not speciate thallium.
10/8/2015	Comment mailbox	NPS - Stephen Monroe	NPS 12- Recommend adding multi-habitat benthic macroinvertebrate sample collection.	NPS 12- Since EPA will be comparing current data to historic datasets, it is important that comparable sampling methods be employed. This may require that we use a range of methods across the watershed. At locations which were sampled in the past as part of EPA's National Rivers and Streams Assessment (NRSA), EPA will employ the sampling procedures used in NRSA to represent multiple habitat types. This method collects macroinvertebrates at 11 equally-spaced transects along the waterbody reach and can be viewed at: http://www2.epa.gov/sites/production/files/2013-11/documents/nrsa_field_manual_4_21_09.pdf
10/8/2015	Comment mailbox	NPS - Stephen Monroe	NPS 13- Recognize that results from full screening sampling were not available and if additional constituents from the mine site are found they may need to be incorporated into the sampling plan. Develop a procedure for adding constituents and monitoring sites to the Watershed Monitoring Plan, if needed, as more information is developed.	NPS 13- Results from screening sampling from the GKM adit have been evaluated and no additional constituents of concern were identified. The updated Conceptual Monitoring Plan lists the analytes that will be monitored under this plan. This plan can be modified during the life of the project as more information becomes available through sampling efforts or review of historic data.
10/8/2015	Comment mailbox	NPS - Stephen Monroe	NPS 14- Contaminants from the Gold King Mine release may potentially cause negative impacts to sediments, soils, groundwater, and surface water, thereby affecting agriculture, industrial, and commercial water users, drinking water supplies, recreational use, and the aquatic ecosystem. Data collected during the monitoring program should be quantitatively evaluated to assess risk for all of these uses.	NPS 14- Please see the final Conceptual Monitoring Plan as additional details describing EPA's anticipated assessment approaches have been included. Data will be assessed against designated uses of each segment based on risk screening levels and water quality standards for that segment/jurisdiction. This may vary across segments but will include aquatic life and human health uses for all segments. Data for segments which have designated uses and criteria to protect agriculture, commercial/industrial, and drinking water uses will be assessed against those uses as well. Currently soil and groundwater testing are not included in the Conceptual Monitoring Plan. EPA convened a meeting with stakeholders on Feb. 5, 2016 to discuss funding for and interest in State/Tribal plans to address media and analytes not covered under EPA's Conceptual Monitoring Plan. Two work groups are proposed to address additional stakeholder monitoring needs in which the need for further groundwater/well water testing will be addressed. In addition, EPA's Office of Research and Development has undertaken a modeling effort to better understand the fate and transport of contaminants from the GKM Release Incident and potential impacts on groundwater. This effort will be used to further refine EPA's monitoring approach for groundwater which will be addressed under a separate effort from this Conceptual Monitoring Plan.
9/22/2015	EPA Call with States, Tribes, Locals	Pete Foster - Wright Water Engineers, La Plata County	Wright Water Call 1 - Recognizing that EPA is interested in sampling sites with historic data. Is EPA only interested in using historic EPA data or are you interested in data from other organizations?	Wright Water Call 1- We are interested in data from other organizations and welcome feedback on site selection and potential replacement sites based on availability of historic data. All data used will need to meet Agency QA/QC requirements.
9/22/2015	EPA Call with States, Tribes, Locals	Pete Foster - Wright Water Engineers, La Plata County	Wright Water Call 2 - Is it a requirement under your plan that sediment and water samples be collected at the same location? If there are nearby locations in which there are historic sediment data with better conditions for sediment collection (depositional areas), would you consider sampling those locations for sediment?	Wright Water Call 2 - Yes, we would consider sampling for water and sediments in different locations if that means we can compare results to historic data and have a better opportunity for more representative sample collection. Please provide your suggestions on particular locations for us to consider.
9/22/2015	EPA Call with States, Tribes, Locals	Pete Foster - Wright Water Engineers, La Plata County	Wright Water Call 3 - When do you plan to collect fish samples?	Wright Water Call 3 - EPA will collect fish samples next summer or fall.
9/22/2015	EPA Call with States, Tribes, Locals	Pete Foster - Wright Water Engineers, La Plata County	Wright Water Call 4 - There may be issues with only collecting tissue and biological samples for one year due to the time needed to properly assess impacts. Would you consider extending the sampling plan.	Wright Water Call 4 - Yes, we are considering sampling again. We are planning to collect data for at least one year to cover all seasonal flow conditions in the watershed. The plan allows for future site specific sampling based on results after 1 year (sampling can be extended into the future) for water, sediment, and biological monitoring. Regarding collection of biological data, we strove to provide enough time for the biological communities to show effects while minimizing time and opportunity for confounding factors to also impact those communities. Because biological communities integrate many environmental factors, the further removed in time that monitoring occurs, the more confounded the data will be with respect to the GKM release and the more difficult the data are to interpret. Hence, EPA will determine if additional biological monitoring is necessary based on data assessment subsequent to the fall 2016 sampling event and as informed by EPA's Office of Research and Development's fate and transport modeling designed to predict potential biological impacts of the release. Additionally, States and Tribes have the opportunity to consider additional biological monitoring in their Clean Water Act 106 funded plans.
9/22/2015	EPA Call with States, Tribes, Locals	Southern Ute Tribe - during call with EPA	SUIT call 1 - Does EPA plan to consider comments and provide a second draft for review prior to implementing the plan?	SUIT call 1 - Many of the comments received on the first draft of the Conceptual Monitoring Plan (CMP) requested an expansion of scope for the plan through addition of analytes, study objectives, sampling locations, and study duration. In response, EPA has decided to provided Clean Water Act 106 funds to Tribes/States to develop and implement their own plans to supplement the monitoring to be carried out by EPA under this plan. Hence, EPA will narrow the focus of the Agency Conceptual Monitoring Plan to only address Objective A activities as described in our draft Conceptual Monitoring Plan. This ensures that data needed by the Agency under Objective A are collected by the Agency; but, provides more flexibility to stakeholders in deciding what to include in plans to meet their own goals. This is the most flexible approach available to the Agency in addressing the comments received. Because of the opportunity for States/Tribes to develop their own plans with stakeholder involvement and to tailor those plans to the study questions that are most relevant to that portion of the watershed under their jurisdiction, EPA intends to finalize the Agency Conceptual Monitoring Plan that addresses Objective A without release of a second draft. We have made every attempt to fully consider and incorporate comments associated with Objective A activities under this plan.
10/8/2015	Comment mailbox	SUIT- Tom Johnson	SUIT 1- Comment: Groundwater monitoring is admittedly absent from the Draft Conceptual Monitoring Plan. The Tribe believes groundwater monitoring of drinking wells and other alluvial wells must be part of any long-term sampling plan. Uncertainty in sediment chemistry fate and transport, hydraulic conductivity and persistence in the sediments drive the need for further investigation. Many drinking water wells were sampled within 1 week of the release, yet hydraulic conductivity in the impacted area varies from location to location and can exhibit variation from 1-14 ft/day to 40-100ft/day1. The probability that these wells were sampled before potential contaminants of concern may have impacted the wells is likely. That sediments may be suspended and redeposit downstream is to be expected, posing risks where none previously existed over a timeline of years, not months. Interactions with contaminated sediments and groundwater have the potential to solubilize metals and increase the potential for human health impacts. Therefore, groundwater well monitoring recommendations are included in Table 1. The Tribe recommends a formal groundwater evaluation be completed within the Reservation to understand the fate and transport of the analytes of concern. This evaluations should include historic data to be complied and assessed for baseline conditions, withdraws/additions from agricultural ditches and groundwater under the influence of surface water.	SUIT 1- We will consider this information when determining the Agency approach to addressing groundwater/well sampling. EPA's Office of Research and Development is undertaking a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with potential biological and groundwater impacts. This modeling effort considers surface waters and their relationship to groundwater. This information will help guide Agency decisions associated with groundwater/well sampling, will be communicated to the public in the near future, and will be addressed under separate cover. We encourage States/Tribes to consider addition of groundwater/well sampling in their own Clean Water Act Section 106 plans for which the Agency is providing funding in 2016.

10/8/2015	Comment mailbox	SUIT- Tom Johnson	SUIT 2- Comment: EPA should devote significant resources to the gathering of the comprehensive data that are referenced in this section. The Tribe, USGS, U.S. Bureau of Reclamation (i.e., in planning for the Animas-La Plata Project), CDPHE, River Watch of Colorado, the City of Durango, Mountain Studies Institute, the Animas River Stakeholders Group and others have collected water quality measurements in the basin for decades. STORET is capable for storing water quality (surface and well) data, but currently lacks the ability to store and manipulate macroinvertebrates, soil, and fish tissue data, so it should not be solely relied upon. An ongoing effort by EPA to collect historical data is of critical importance to differentiate between historic conditions and release related impacts.	SUIT 2- We are gathering all available data that may be useful for assessment purposes. We appreciate any data you share with us. STORET/WQX is capable of storing sediment and biological data. Training and support are available through EPA's Office of Water on how to use STORET/WQX for entering and retrieving sediment and biological data. Region 8 will be reaching out to you and others soon to see if you would like this training.
10/8/2015	Comment mailbox	SUIT- Tom Johnson	SUIT 3- Comment: This section describes the strategy to "determine if water and sediment quality trends are similar to trends observed before the GKM release." EPA does not define, in quantitative terms in the Conceptual Monitoring Plan, what is meant by "similar" or "trends". In the final SAP for this project, data quality objectives must include quantitatively how these data are to be evaluated for pre/post release differences.	SUIT 3- Please see the final Conceptual Monitoring Plan as additional details describing EPA's anticipated assessment approaches have been included.
10/8/2015	Comment mailbox	SUIT- Tom Johnson	SUIT 4- Comment: The Tribe contends that availability of biological data, specifically macroinvertebrate data, is more robust in quantity and special variability than sediment data. Given the data richness, and ability of macroinvertebrates to knowingly respond to environmental changes, significant emphasis should be put on the evaluation of pre and post release biological data. Given that the Gold King Spill is just the most recent event in the Animas River, related to historical mining impacts, it is especially vital that EPA invest now to compile and analyze all available water quality data, both to assess the impacts of the 2015 release and to provide a baseline for assessing the effectiveness of future remediation efforts.	SUIT 4- Thank you for data that you have already shared with us and we would appreciate any additional data that you may have. The EPA agrees that macroinvertebrate and other biological data are important water quality indicators. We will use biological data to support the determination of maintenance of historic conditions for any site in which historic data are adequate. In addition, we will plan to collect macroinvertebrate and fish community data across the geographic scope addressed in this plan to support development of baseline information for this watershed.
10/8/2015	Comment mailbox	SUIT- Tom Johnson	SUIT 5- Comment: Each of the study objectives should clearly define the designated uses for which the impacted areas will be assessed. The Animas River has designated uses for aquatic life, municipal and industrial, recreation, and agricultural uses. Water from shallow groundwater wells for human consumption and livestock are also present.	SUIT 5- Because of the large number of designated uses applicable across the project area, we included references to State and tribal standards where these are described. We will consider directly incorporating this in the final conceptual monitoring plan or QAPP.
10/8/2015	Comment mailbox	SUIT- Tom Johnson	SUIT 6- Comment: EPA should define quantitatively what is meant by "trends" in the study area have "changed". What will constitute an acceptable deviation from the historic condition? How will the historical condition be assessed to provide a baseline characterization? What period of record should be included for historical conditions? What indices will be used for biological communities? All of these questions must be answered and the rationale for the decisions explained.	SUIT 6- Please see the final Conceptual Monitoring Plan as additional details describing EPA's anticipated assessment approaches have been included.
10/8/2015	Comment mailbox	SUIT- Tom Johnson	SUIT 7- Comment: EPA should define quantitatively what is meant by "trends" in the study area have "changed". What will constitute an acceptable deviation from the historic condition? How will the historical condition be assessed to provide a baseline characterization? What period of record should be included for historical conditions? What indices will be used for biological communities? All of these questions must be answered and the rationale for the decisions explained. - See Table 1 in SUIT comments	SUIT 7- Please see the final Conceptual Monitoring Plan as additional details describing EPA's anticipated assessment approaches have been included.
10/8/2015	Comment mailbox	SUIT- Tom Johnson	SUIT 8- Comment: The Tribe recommends the following analytes for GKM long term monitoring study (Table 2). • For complete water quality general parameters, recommend adding total suspended solids, total dissolved solids and alkalinity. These parameters will capture turbidity impacts and buffering capacity of the waterbody. • Recommend oxidation-reduction potential of sediment sampling. Oxidation reduction potential may impact the solubility of metals in the water column. See Table 2 in SUIT comments	SUIT 8- We have added TSS, and alkalinity. We are measuring specific conductance, which closely approximates TDS. Historic TDS data are not available and there are no water quality standards against which to compare TDS data so we have chosen not add TDS. We agree that analysis of redox assists in predicting the potential availability/toxicity of metals in sediments. However, since redox potential fluctuates spatially and temporally, it would be more conservative to compare total metals values against benchmarks for estimation of risks. Therefore, to be conservative, we plan to compare total metals concentrations in sediments to applicable benchmarks and assume worst case availability for risk estimation instead of measuring redox.
10/8/2015	Comment mailbox	SUIT- Tom Johnson	SUIT 9- Comment: The Tribe's Water Quality Program (WQP) is the most suitable entity to sample and analyze all media on the Reservation because: • The WQP has been monitoring Tribal waters on the Reservation since 1992. • The WQP operates under EPA-approved SAPP, QAP, SOP's, and other grant-related documents. • The Tribe's FY2016 EPA-approved work plan includes monitoring the Animas River as part of the Tribe's §106 program to support development and implementation of the Tribe's water quality standards. The ability to collect additional data while on site for §106 program sampling activities is cost effective. • The Tribe already has agreements with landowners for tribal monitoring sites. These agreements ensure the Tribe has access to the monitoring sites and improves security for equipment. The Tribe has worked to develop and maintain positive relationships with landowners. EPA, or EPA contractors, may or may not be able to secure similar agreements. • The Tribe is amenable to working with EPA to collect split samples or conduct other cooperative quality assurance-related monitoring activities. • The Tribe can access land and water owned by the Tribe.	SUIT 9- In response to your comment and those of other stakeholders requesting State/tribal directed sampling efforts, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. In addition, annual 106 funds provided to States/Tribes may be used to monitor the watershed. In addition, EPA would like to collaborate with the Southern Ute Indian Tribe on the data collection EPA plans to carry out under Objective A in the Conceptual Monitoring Plan.
10/8/2015	Comment mailbox	SUIT- Tom Johnson	SUIT 10- Comment: Water quality in Colorado is regulated at the segment level. Segments are defined by CDPHE and in the Tribe's water quality standards on the basis of geomorphology, hydrological segmentation, or other changes in landform or use that warrant a segment break. The Tribe suggests the EPA compose the SAP on the segment level, provide methods for assimilating all data within a segment, and assess those data at a segment level, as would be the case for assessments under Clean Water Act Sections 303(d) and 305(b).	SUIT 10- Thank you for your suggestion. Because the focus of our initial assessment under Objective A will be a historic comparison, we aim to assess data by each individual site in order to retain as much resolution as possible. However, if data at a particular site are too few to enable comparison, we will consider pooling those data across similar sites, which may coincide with water quality standards based segmentation. Assessment of water quality standards will be done consistent with the methods used by the jurisdictional State or Tribe. If SUIT prefers pooling all data by water quality standards-based segment, we will use this method for the Animas within the SUIT reservation.
10/8/2015	Comment mailbox	SUIT- Tom Johnson	SUIT 11- Comment: The proposed Monitoring Plan sampling locations may not be best suited to describe the impact from the various media identified in Table 1. Proposed Tribal sites in Table 3 were selected given the amount and variety of historical data (Table 4) and recreational activity. The Tribe's suggested sites provide coverage for all segments (and defined designated uses) identified in the Tribe's draft water quality standards. See Table 3 in SUIT comments	SUIT 11- EPA is considering SUIT's input on site selection for Objective A sites and has made adjustments to site list based on this feedback and historic data assembly which is occurring at this time. We will be in contact with you to verify final site selection and discuss this further.
10/8/2015	Comment mailbox	SUIT- Tom Johnson	SUIT 12- Comment: Multiple methods for individual matrices are listed. Should multiple methods be approved, how will EPA address comparability between the different collection techniques? For example, immediately following the spill, CDPHE collected sediment samples that focused on "hot spots" where samples were collected from areas that visibly indicated a high degree of contaminated sediment, whereas EPA contractors collected a randomized collection of all sediments within a specified area, regardless of visible presence. The Tribe suggests a limited set of SOP's be utilized in the assessment to provide for ease of data comparison.	SUIT 12- Our primary goal under Objective A is to understand if there has been a change at a particular site given the GKM release incident. Hence, it is important that methods used to collect information at a particular site be comparable to those used to collect historic data at that site. Hence, our goal will be to collect representative samples of water, sediment, and biological communities using comparable methods to those used for historic data collection - we will not focus on hot spot sampling but may refer hot spot concerns to our Emergency Response Program for further action/sampling if needed. A variety of macro collection methods will be used across the watershed reflecting the variety of methods in the historic dataset.
10/8/2015	Comment mailbox	SUIT- Tom Johnson	SUIT 13- Comment: The EPA anticipates using a single National Environmental Laboratory Accreditation Conference (NELAC)-accredited lab that conforms to American National Standard ASQ/ANSI E4 quality assurance systems. Will this lab be available for 3rd party use to perform independent sampling or split sample analysis?	SUIT 13- EPA will consider collaborating with and informing parties interested in observing sampling events and/or performing side by side sampling. States and Tribes may choose to use Clean Water Act Section 106 funding for sample analyses of third party-collected samples.
10/8/2015	Comment mailbox	SUIT- Tom Johnson	SUIT 14- Comment: Data sharing and information management during the spill has been a challenge for EPA. STORET will not house all of the types of data identified in the Monitoring Plan. The Tribe suggests a separate Information Management and Assessment Plan section in the QAPP, or as a stand-alone document, regarding data management. The Plan should detail how historical data are to be managed in STORET or alternative databases. Arizona USGS has a very useful interactive mapping tool that connects to disparate data sources and allows the user to see all the various entities monitoring efforts and data. http://maps.azgs.az.gov/gold-king-mine-spill/	SUIT 14- Please see the final Conceptual Monitoring Plan as al data management appendix has been added in response to this comment. STORET/WQX should be able to handle all of the data types identified in the conceptual plan. The QAPP will have an appropriate data management section.
10/8/2015	Comment mailbox	SUIT- Tom Johnson	SUIT 15- Comment: The Tribe suggests that EPA develop a communication plan that describes how these data will be presented to the public. Translating scientific data to useful information is an important part of the GKM Response. This plan can also be used to inform the public of the important work the EPA and the Tribe are performing to understand GKM impacts and detail the level of collaboration between the agencies.	SUIT 15- Thank you. EPA will develop a communication plan.

9/22/2015	EPA Call with States, Tribes, Locals	Utah DEQ call with EPA	UDEQ Call 1 - Utah is planning on doing sampling in the watershed. Is EPA interested in collaborating or should State's plan to sample separately?	UDEQ Call 1 - In response to stakeholders requesting State/tribal directed sampling efforts, the EPA is planning to provide additional Clean Water Act 106 funds for States/Tribes to conduct their own sampling efforts. In addition, annual 106 funds provided to States/Tribes may be used to monitor the watershed. In addition, EPA would like to collaborate with the UDEQ on the data collection EPA plans to carry out under Objective A in the Conceptual Monitoring Plan.
9/22/2015	EPA Call with States, Tribes, Locals	Utah DEQ call with EPA	UDEQ Call 2 - Have you considered identifying reference sites to use to determine mining impacts in this watershed? In particular have you considered use of sediment cores in Lake Powell to identify the metals loading that has occurred over the last decade or so since the deposition and sediments end up in Lake Powell?	UDEQ Call 2 -Four reference or background sites are being added or considered including: Animas River above cement Creek, Cement Creek above the spill, Mineral Creek just upstream of the Animas, and a sample site on the San Juan River above the Animas River confluence. We would like to speak with you to gather more information on your suggested reference site on Montezuma Creek as well.
10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 1- DWQ recommends that EPA consider selecting sites within Utah that overlap with sites that were sampled by DWQ and its partners during the response to the Gold King Mine release. DWQ's sites overlap with the following EPA Region 9 sites: SJ4C, SJMC, SJBB, and SJMH. Specifically, we recommend that EPA select site SJMC instead of SJME to build on the dataset that DWQ has been developing. DWQ also collected samples at Clay Hills which is near the proposed site SJIN. DWQ has the following data collected during the response for these sites, in addition to historical data for some sites: -Pre-plume sampling: I sediment sample per site; 2 water quality samples per site on 8/8/201 5 -Post-plume sampling: 5 sediment samples per site; daily water quality samples per site from 8/8/15 -8/28/15 and weekly samples since then; weekly macroinvertebrate samples since 8/28/2015.	UDEQ 1- Based on your feedback, EPA replaced site SJME with Utah's recommended SJMC site for the fall 2015 sampling and intends to include this site in future sampling efforts under Objective A. In addition EPA sampled Clay Hills due to access issues with SJIN. We will include this site for future events as well.
10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 2- DWQ partners also collected macroinvertebrate samples and fish from the San Juan River on 8/8/2015. The samples are currently frozen and would be available for EPA to analyze.	UDEQ 2- EPA is very interested in using the Utah DWQ partners' macroinvertebrate and fish data as part of the objective A assessment. EPA will follow up with Utah DWQ on accessing the data for analysis.
10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 3- DWQ recommends that EPA select sediment collection sites within Lake Powell that are comparable to the sites used in USGS Open-File Report 2014-2016, Sediment and Water Chemistry of the San Juan River and Escalante River Deltas of Lake Powell, Utah, 2010 - 2011	UDEQ 3- We appreciate the desire for additional sample locations in Lake Powell. In response, EPA plans to provide Clean Water Act 106 funds to States and Tribes for expansion of monitoring activities for Objective B under their own plans. Tribes and States may chose to expand the scope of monitoring sites for this Objective to determine baseline conditions in the watershed. In addition, the US EPA Office of Research and Development (ORD) has undertaken a modeling effort to determine the fate and transport of the sediments from the GKM spill. If additional sampling stations are warranted based on the ORD assessment, we may consider changing or adding sediment sampling sites as well.
10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 4- DWQ also recommends adding sites in the San Juan River system that are not influenced by the Gold King Mine releases, such as the San Juan River above the confluence with the Animas and major tributaries to the San Juan River in Utah and New Mexico. These sites would provide valuable insight into the pre-release conditions present within the watershed, even with limited historical data.	UDEQ 4- Four reference or background sites are being added or considered including: Animas River above cement Creek, Cement Creek above the spill, Mineral Creek just upstream of the Animas, and a sample site on the San Juan River above the Animas River confluence. We would like to speak with you to gather more information on your suggested reference site on Montezuma Creek as well.
10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 5- DWQ strongly encourages EPA to include sediment and benthic tissue samples at the Utah sites considering that the San Juan River in Utah and especially the San Juan delta in Lake Powell are depositional areas that likely accumulate metals released from the Silverton area, including the August 5 Gold King Mine release. DWQ has pre-release and post-release sediment data that could be used for comparative purposes at the four DWQ monitoring sites.	UDEQ 5- Thank you. We will collect sediment and benthic tissues at all locations.
10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 5.5- DWQ is pleased to see plans to sample snowmelt runoff and storm events. However, we believe that the analysis of storm influence will be stronger if samples are also collected at sites in the San Juan River system that are not influenced by the Gold King Mine releases, such as Montezuma Creek and the San Juan River above the Animas. Although historical data may be limited for these sites, sampling at these locations would help differentiate between metal concentrations observed during the release due to stormflow runoff from tributaries and those associated with the release and/or remobilization of legacy contamination in the system.	UDEQ 5.5- sites on Cement Creek upstream of the spill, the Animas upstream of the spill, Mineral Creek (a tributary to the Animas) , the San Juan River above the Animas River confluence have been added. The site on Montezuma Creek will be considered. We will be in contact with UDEQ to better understand the needs for sampling on Montezuma Creek.
10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 6-The current monitoring plan somewhat minimizes the potential importance of biological data. Although biological impacts are more difficult to interpret than water chemistry data, the biota represent the only comprehensive, time-integrated measure of both pre- and post-release conditions within the Animas and San Juan watersheds. DWQ recommends that additional emphasis be placed on biological monitoring including collation and analysis of historic biological data. DWQ encourages EPA to conduct a full inventory of historic biological data for the San Juan system including data available from DWQ, the Utah Division of Wildlife Resources, National Park Service, BLM, USFWS, and the USGS. DWQ also recommends that "biological community" be added to the list of primary media described on page 3 of the plan.	UDEQ 6- The EPA agrees that macroinvertebrate and other biological data are important water quality indicators. We are compiling historic data from UDEQ and UDWQ and will be collecting post-release data to assess against historic/pre-release data. We encourage all organizations with any type of data to enter that data into STORET/WQX and we are providing technical support to any States or Tribes that have not already uploaded any data. We will use biological data to support the determination of maintenance of historic conditions for any site in which historic data are adequate. In addition, we will plan to collect macroinvertebrate and fish community data across the geographic scope addressed in this plan to support development of baseline information for this watershed. EPA's Office of Research and Development is undertaking a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with biological impacts related to the release. This information in conjunction with the data gathered under this monitoring plan will help identify areas requiring further study.
10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 7- The monitoring plan would benefit from biological samples on unaffected tributaries and increased frequency and duration. Especially if pre-release samples were collected from multiple seasons, additional biological samples in different seasons would increase comparability with historical data and help rule out spurious differences associated with seasonality. DWQ also recommends that biological monitoring be conducted for at least 3 years to fully capture any chronic effects of the long-term releases of metals from Gold King and other mines in the Silverton area. Finally, in addition to the use of biological assessment indices to-identify changes in condition, relatively simple biological dissimilarities between pre- and post-incident communities could provide important insight into general changes in biota.	UDEQ 7 - The EPA is planning to include four sites outside of the influence of the GKM release (Animas above Cement Creek, Cement Creek upstream of spill, Mineral Creek just upstream of the Animas, and San Juan upstream of the Animas) and will consider your suggested site on Montezuma Creek. We considered increasing the frequency of biological sampling, but are targeting the seasons and time periods associated with our indicator methods (NRSA) and historic data availability in order to increase comparability between those data. We will use biological data to determine condition changes for sites in which adequate historic data are available. In determining when to collect biological data, we strove to provide enough time for the biological communities to show effects while minimizing time and opportunity for confounding factors to also impact those communities. EPA will determine if additional biological monitoring is necessary subsequent to the fall 2016 event and as informed by EPA's Office of Research and Development's fate and transport modeling designed to predict potential biological impacts of the release. Additionally, States and Tribes have the opportunity to consider additional biological monitoring in their Clean Water Act 106 plans
10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 8- DWQ recommends that EPA define the period of record considered to be representative of before and after the release. DWQ suggests three different time frames that represent changes in releases from the Silverton Area: pre-closure of the American Tunnel (before 2002); period of on-going releases from Silverton Area(2002 - July 2015); and post Gold King Mine Release (August 5). The figure below shows an estimate of the total historic releases, including the release on August 5 , 2015 using flow estimates reported in the Summary Report: EPA Internal Review of the August 5, 2015 Gold King Mine Blowout dated 8/24/2015. Based on these flow estimates, the total cumulative load of releases from Gold King exceeds 750 million gallons since 2005 and does not account for releases from adjacent mines. DWQ strongly encourages EPA to better characterize the historic releases and make the total metal load release estimates available to the other agencies and the public. This is especially important for Utah's waters which include the first downstream major depositional areas for the historic releases. See figure in Utah's comments	UDEQ 8- The EPA has defined the period of record from 2009 to a time prior to the GKM plume, which will vary location by location, but is generally early August 2015. The third American Tunnel bulkhead was installed in December 2002; however it did not eliminate discharge. For a brief period from January 2003 to May 2004, the discharge was actively treated at the Gladstone area treatment plant. All treatment stopped when the ponds were dismantled in May 2005. Treatment has not recommenced since this point although pilot projects have been tested. In Spring 2007, breach discharges from Gold King 7 heavily impacted the North Fork of Cement Creek. In order to avoid capturing these events that do not represent current conditions, the EPA will not use data from this time period. Data availability from 2007 to 2009 is limited. In 2009, regular EPA sampling began, establishing a reliable, relatively robust dataset. Hence, our period of record will begin in 2009. EPA may evaluate loadings as part of our final report.

10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 9- DWQ appreciates the need to finalize the monitoring plan quickly such that crews can begin sampling this fall. However, we also believe that additional work needs to be put into the analytical aspects of the overall plan. DWQ would like to be involved in developing the full analysis plan once monitoring has commenced. For example, additional detail is necessary to determine how pre-release data will be compared to post-release data given the complexity and variability of the San Juan River system. Specifically, DWQ recommends that EPA clearly identify which metrics and statistical methods will be used to determine whether there is a difference between pre- and post- conditions and how mixed results (e.g. water quality versus biological samples) and inferring factors (e.g. storm influence) will be handled.	UDEQ 9- Please see the final Conceptual Monitoring Plan as additional details describing EPA's anticipated assessment approaches have been included. Thank you for your offer of help to develop the full analysis plan. We will continue to coordinate with you through plan finalization, sampling and data assessment. Sediment, water column , and biological data for locations in which adequate historic data are available for comparison will be used to determine if further study is needed. If mixed results occur with respect to pre-release and benchmark comparisons, we will continue to monitor sediment, water, and biology. EPA's Office of Research and Development has undertaken a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with biological impacts related to the release. This information in conjunction with the data gathered under this monitoring plan will help identify areas requiring further study.
10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 10- With respect to comparing water quality and sediment samples to screening levels for human health, aquatic life and/or agricultural uses, DWQ asks that EPA use the same methods that the Utah Department of Health developed for screening water quality and sediment data in the response to the Gold King Mine release. This will ensure that the message to the public is clear and consistent across agencies. The screening methods and levels are available on DEQ's Gold King Mine website and attached to this comment letter. Further, EPA should include the specific screening values to be used in the analysis as a table in the final monitoring plan.	UDEQ 10- Please see the final Conceptual Monitoring Plan as additional details describing EPA's anticipated assessment approaches have been included. We will use methods employed by State and tribal agencies for assessment of water quality standards. EPA will included the screening values in the final version of the Conceptual Monitoring Plan.
10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 11 - EPA indicates that the quality of historic data will be taken into account in determining which datasets are appropriate to include the analysis. DWQ recommends that EPA define what quality measures will be used to determine which datasets to incorporate into the analysis. DWQ would appreciate the opportunity to develop the quality standards in partnership with EPA and the other States and Tribes.	UDEQ 11 - EPA has quality control guidelines for use of secondary data which will be referenced in our QAPP. We also welcome input from UDEQ on development of quality standards for such and will be in contact to discuss.
10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 12- DWQ also recommends that all data used in the analysis be compiled in a central location that is available for public access and provides clear public communication tools. DWQ strongly recommends that the proposed use of the SCRIBE database also include historic data made available from States, Tribes, and other federal agencies.	UDEQ 12- Data will be published to the Water Quality Portal (http://waterqualitydata.us) through STORET/WQX. EPA will work with cooperators to ensure that their data, used in the assessment, are also made available in the Water Quality Portal through STORET/WQX.
10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 13- DWQ recommends that EPA add a new section to the plan that outlines the agency's plan to collaborate with partnering States, Tribes, local health departments, and other federal agencies (e.g. BLM and National Park Service and USGS).	UDEQ 13- Thank you for the comment. We will add this section to the plan.
10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 14- Further, this section of the plan should describe how information will be shared with the public in a manner that is timely and easy to understand. This should include details about how quickly and frequently the agency plans to share information and through what means. DWQ recommends that EPA consider development of a more intuitive website for the public to access key updates and information.	UDEQ 14- EPA will evaluate approaches to leverage the Portal web services to provide interactive viewers for the data and assessment tools.
10/8/2015	Comment mailbox	Utah DWQ - Erica Gaddis	UDEQ 15- The Division of Drinking Water (DDW) believes that any impacts from the spill may not be evident in drinking water wells for some time. DDW recommends that if any of the water quality samples in the San Juan River are found to exceed any of Utah's water quality standards for domestic source water that EPA should monitoring drinking water wells that could be affected by shallow aquifers influenced by the river.	UDEQ 15- We will consider this information when determining the Agency approach to addressing groundwater/well sampling. EPA's Office of Research and Development is undertaking a modeling effort to consider fate and transport of contaminants from the GKM Release for water and sediment along with potential biological and groundwater impacts. This modeling effort considers surface waters and their relationship to groundwater. This information will help guide Agency decisions associated with groundwater/well sampling, will be communicated to the public in the near future, and will be addressed under separate cover. We encourage States/Tribes to consider addition of groundwater/well sampling in their own Clean Water Act Section 106 plans for which the Agency is providing funding in 2016.
10/20/2015	Hardcopy in mail (via USPS)	Ute Mountain Ute Tribe-Scott Clow and Colin Larrick	UMUT 1- In general we find the draft plan acceptable with the addition of some minor revisions to, "Table 1, Sampling and Monitoring Schedule for Potential Sampling Sites" and an extension to the sampling duration.	UMUT 1- Comment noted.
10/20/2015	Hardcopy in mail (via USPS)	Ute Mountain Ute Tribe-Scott Clow and Colin Larrick	UMUT 2- The proposed monitoring location on the Ute Mountain Ute Reservation, SJ-4C does have a long-term monitoring history with a period of record for water chemistry and macroinvertebrates that should be sufficient to fit into the "Objective A" category allowing for identification of potential recent changes in surface water and/or sediment quality and potential recent impacts to the macroinvertebrate community.	UMUT 2- EPA appreciates your comment. We will include SJ4C as a sampling site in the Conceptual Monitoring Plan.
10/20/2015	Hardcopy in mail (via USPS)	Ute Mountain Ute Tribe-Scott Clow and Colin Larrick	UMUT 3- Past research regarding water quality in the San Juan River has shown that the highest sediment concentrations occur in the first streamflow event following a long period of no discharge (DOI, 1999), metals stored in colloidal phase of the bed load during the winter months have a high probability of being released during high volume spring runoff. The first high discharge flows in early spring should be targeted and prioritized for analysis of total recoverable metals. We suggest the following modifications to Table 1 on page 7 of the plan: 1) add sediment for sample fraction to the Spring- June column addition to the analytes listed under "Water Column" and;	UMUT 3- We expect that during high flow events, sediments will be entrained in the water column. Analysis of total metals and TSS in the water column samples will help provide an understanding of sediment movement under these conditions. During high flow, it is can be difficult to locate and collect benthic sediment samples in the higher gradient streams. Hence, we anticipate that our best opportunity for collection of benthic sediments will be prior to run-off and after run-off to support understanding of sediment fate across flow regimes. We will attempt to collect benthic sediments during the high flow events where possible. In addition our Office of Research and Development is undertaking a water and sediment contaminant fate and transport modeling effort to better understand and predict sediment transport in the system.
10/20/2015	Hardcopy in mail (via USPS)	Ute Mountain Ute Tribe-Scott Clow and Colin Larrick	UMUT 4- 2) Revise ["Spring-June"] to "May/June" for the Spring season	UMUT 4- We will revise the text to reflect the recommendation.
10/20/2015	Hardcopy in mail (via USPS)	Ute Mountain Ute Tribe-Scott Clow and Colin Larrick	UMUT 5- Although the draft plan States that monitoring efforts may be extended beyond one year duration following the evaluation of one year of results we feel strongly that at least two years is needed as a baseline for evaluation, especially considering the variability and challenges with storm water flows and sampling.	UMUT 5- We would consider extending the plan duration. We are planning to collect data for at least one year to cover all seasonal flow conditions in the watershed. The plan allows for future site specific sampling based on results after 1 year (sampling can be extended into the future) for water, sediment, and biological monitoring. Regarding collection of biological data, we strove to provide enough time for the biological communities to show effects while minimizing time and opportunity for confounding factors to also impact those communities. Because biological communities integrate many environmental factors, the further removed in time that monitoring occurs, the more confounded the data will be with respect to the GKM release and the more difficult the data are to interpret. Hence, EPA will determine if additional biological monitoring is necessary based on data assessment subsequent to the fall 2016 sampling event and as informed by EPA's Office of Research and Development's fate and transport modeling designed to predict potential biological impacts of the release. Additionally, States and Tribes have the opportunity to consider additional biological monitoring in their Clean Water Act 106 funded plans.
10/20/2015	Hardcopy in mail (via USPS)	Ute Mountain Ute Tribe-Scott Clow and Colin Larrick	UMUT 6- At a minimum, the storm water component needs to be done for multiple years, three to five would be more realistic to meet the need of establishing an informative data sets of post-Gold King results for evaluation.	UMUT 6- We would consider extending the plan duration. We are planning to collect data for at least one year to cover all seasonal flow conditions in the watershed. The plan allows for future site specific sampling based on results after 1 year (sampling can be extended into the future) for water, sediment, and biological monitoring. Regarding collection of biological data, we strove to provide enough time for the biological communities to show effects while minimizing time and opportunity for confounding factors to also impact those communities. Because biological communities integrate many environmental factors, the further removed in time that monitoring occurs, the more confounded the data will be with respect to the GKM release and the more difficult the data are to interpret. Hence, EPA will determine if additional biological monitoring is necessary based on data assessment subsequent to the fall 2016 sampling event and as informed by EPA's Office of Research and Development's fate and transport modeling designed to predict potential biological impacts of the release. Additionally, States and Tribes have the opportunity to consider additional biological monitoring in their Clean Water Act 106 funded plans.
10/20/2015	Hardcopy in mail (via USPS)	Ute Mountain Ute Tribe-Scott Clow and Colin Larrick	UMUT 7- Our final suggestion would be to incorporate data from San Juan Recovery Implementation Program into water column, sediment, and biota monitoring for San Juan River, available at: http://www.fws.gov/southwest/sjrip/DR_WQC.cfm; Reference: U.S. Department of the Interior. 1999. "Quality of Water Colorado River Basin, Progress Report No. 19." U.S. Bureau of Reclamation.	UMUT 7- We appreciate this information; however, we are concerned that much of the data referenced in the comment are old enough that they are unlikely to represent pre-release conditions. A number of activities that affected water quality in the watershed have occurred since these data were taken (see attached timeline from the Animas River Stakeholders Group). The EPA has selected a 2009 to August 2015 period of record to characterize pre-release conditions based upon standard EPA, State and tribal practice and an understanding of activities within the watershed that affect water quality.