

Statewide Mapping Advisory Committee Meeting

Minutes

Wednesday, January 24, 2018; 1:30 PM – 3:30 PM

NC Department of Environmental Quality

Archdale Building, Ground Floor Hearing Room, 512 N. Salisbury St., Raleigh, NC 27603

Welcome/Introductions – Gary Thompson, Vice Chair, called the meeting to order and welcomed Kenneth Taylor, Alice Wilson, Hope Morgan, John Bridgers, Rich Elkins, Cam McNutt, John Farley, Jeff Essic, Sean McGuire, Tim Johnson, Ben Shelton, David Giordano, Jeff Brown, and on the phone Camille Tyndall Watson, Stephen Dew, Drew Pilant, Marcus Bryant, and Silvia Terziotti. Dan Madding joined the meeting as a guest.

Minutes

The committee approved the October 18, 2017 Minutes as written.

Framework+ Datasets

Mr. Thompson called on members to report on opportunities, development, maintenance, and issues for Geospatial Framework-Plus datasets for North Carolina.

- *ORTHOIMAGERY*

Ben Shelton (CGIA) provided a brief status report on the Statewide Orthoimagery Program funded by the NC 911 Board. The project team is closing out the 26-county Eastern Piedmont phase (2017) after delivering products to the Public Safety Answering Points (PSAPs) in four regional meetings in December, six to seven weeks earlier than last year. Visual quality review exceeded its goal by reviewing more than 60 percent of all tiles thanks to strong local government participation. He displayed the trend in the number of issues found during quality review since the beginning of the first four-year cycle in 2012. For example, in the coastal region, the percent of tiles that passed without any quality issue identified increased from 87 percent in 2012 to 96 percent in 2016. He attributed much of the improvement to the availability of higher resolution digital elevation models from the statewide LiDAR program, applied in ortho rectification. Also, improvements in technology and compressed schedules for contractors accelerated the 2017 project to meet the goal of getting imagery to local governments earlier.

For the next phase, the Northern Piedmont and Mountains (2018), the project team selected four contractors (Sanborn Map Company, Atlas Geographic Data, Spatial Data Consultants, and Surdex Corporation) and assigned study areas for imagery acquisition beginning in early February. Several local governments are planning to piggy-back on the state project to buy-up higher resolution imagery (3-inch ground resolution) and/or planimetric data, and there is interest in color infrared imagery for reasons to be determined. Jurisdictions working on plans include the City of High Point, the Town of Boone, and municipalities in Davie County.

- *CADASTRAL*

John Bridgers (Working Group for Seamless Parcels) reported that 95 of 100 counties completed the fall update in the NC Parcel Transformer. The five counties that updated in the spring but not the fall had issues with personnel, software, or data.

The plan for 2018 is to begin the spring update in March, accommodate counties that are updating quarterly, make more progress on populating parcel use descriptions and present use value, continue to support operation and maintenance of the NC Parcels Transformer with cost-share from NCDOT, NCDA&CS, and CGIA, and continue to provide technical assistance by John as co-chair of the working group and by CGIA.

In response to a question, Mr. Bridgers explained that the statewide compilation of parcels is updated every weekend with data updated by whatever county participated that week. Counties may update more frequently than semi-annually if they wish. The parcel data include a field populated by the transformation date, and downloadable zip files have the date in the title. Mr. Farley added that NCDOT users, for example in the group working on rights-of-way, value more frequent updates of parcels to find current property ownership information. Mr. Brown invited a list of counties where NCDOT project activity is greatest to inform the NC Parcels team, and Mr. Bridgers urged SMAC members to communicate urgent needs to help the team prioritize efforts.

Hope Morgan pointed out that NC Emergency Management (NCEM) collects copies of county geospatial data early each calendar year in preparation for the next hurricane season. Datasets are obtained by download from county websites where available and by letter requesting copies to be transferred to an FTP site hosted by NCEM. In the context of statewide compilations of parcels and street centerlines from local government sources, she suggested a coordinated request for local data if practical. Mr. Farley confirmed that he brought that topic from the State Government GIS Users Committee to the Management and Operations Committee for discussion. The goal is to have a single data collection point to simplify data sharing by local governments. There is work to be done to realize that goal. Ms. Morgan added that in the short term she can state in a letter to a county that if the county shares parcels with NC Parcels Program and street centerlines with NCDOT, NCEM will get the data from those state sources and not duplicate collection. Mr. Farley added that as other datasets are aggregated at the state level, the NCEM letter can be modified to focus on data that are not collected by another state agency or program. Mr. Johnson agreed this is a GICC-level issue. Ms. Morgan needs to get a letter out by March and will ask for comments on this year's letter. She is willing to adjust the NCEM process for 2019 based on Council findings leading to a more comprehensive data request to meet needs of multiple state programs. Next year is the target.

Voted: SMAC will ask the Council to develop an approach and communication for an annual geospatial data request to county data managers that is consolidated to meet data needs for multiple state programs.

- *ELEVATION*

Hope Morgan reported for the Department of Public Safety on North Carolina LiDAR. For Phase 4 LiDAR collected with a Geiger Mode sensor, 11 of 20 counties have been delivered by contractors. Data were collected by block, but products are coming in by county. Seven of the 11 counties have been shared with funding partner US Geological Survey (USGS) and four are in review for quality control and going to USGS within a week. Deliveries of other counties will continue through February as review calls are resolved and digital elevation models produced. The project team is working through final documentation and preparing seals. The Department is not waiting for completion of USGS review before data will be available online. Meanwhile, the Spatial Data Download site is in transition to a new server with more storage space.

Regarding web services for elevation, Ms. Morgan plans to send completed counties (tiles) to Brett Spivey for processing into web services for NC OneMap. Processing is set up to generate statewide services using the first three phases and legacy data in Phase 4 and 5 regions (first quarter 2018), and replace legacy data in statewide services as data from Phases 4 and 5 are released.

Phase 5 is going well. Two counties have been delivered for quality control. For counties in the Northern Piedmont and Mountains 2018 phase of orthoimagery, a bare earth product is being delivered after the auto classification process to provide data in time for ortho rectification. New process rules for Phase 5 are needed in the mountains. Phase 5 has 21 counties in all. Completion of processing is expected by the end of summer 2018. Release of downloadable products is likely to be complete in 2019.

Ms. Morgan also reported on processing of contours from LiDAR data. NC Emergency Management is generating one-foot contours as sealed products for its business needs, including analysis of where water will flow in flood conditions. The process is to run contours by tile from LAS files. A full county takes about a week of processing. She displayed a Dare County example. Contour files (lines) in coastal counties range from 3 to 30 GB per county. Files will get much larger in the foothills and the mountains. Visually, the lines are not smooth and do not resemble the cartographic products on USGS topographic maps or the contour lines produced by NCDOT years ago using legacy LiDAR data. Smoothing techniques tend to generate errors, and the accuracy of the sealed product is more important to NCEM than the appearance. NCEM will continue to generate contour files with time-consuming processing. Copies will be available, but the data are not well suited for public consumption.

Ms. Morgan is researching an alternative to the sealed product. Similar to the tool available in NOAA's [Data Access Viewer](#), an online tool would enable a consumer to select an area of interest, a contour interval, and an output format to run contours on the fly and get access to the resulting product as a downloadable dataset. Smoothing techniques could be built in for a more cartographic representation of contours. The consumer would be responsible for applying the results. Contours generated in this way would not replace validation of elevation for engineering and surveying purposes. Keith

Johnston is a contact at NCDOT Photogrammetry where staff have created contours for projects using 10-foot digital elevation models.

In discussion, the committee suggested a practical direction for North Carolina for now is to direct consumers to the NOAA website for self-service generation of contours in areas of interest. Kirk Waters is a contact at NOAA and may be available to consult with the Working Group for Orthoimagery and Elevation to consider this approach.

Voted: SMAC approved an assignment to the Working Group for Orthoimagery and Elevation to analyze and make a recommendation to SMAC at the April meeting.

Sean McGuire's question about products led to confirmation of downloadable LiDAR points (LAS) and digital elevation models (DEM) from NCEM, and coming web services for 10-foot DEM (statewide), slope, aspect, shaded relief and shaded elevation from NC OneMap.

Mr. Farley added that NCDOT is doing research on LiDAR as a source for feature extraction. Research will inform plans that may result in updates for LiDAR Phases 1-3 to complete coverage at 8 points per square meter statewide. For example, NCEM extracted building footprints for Phases 1-3. More collaboration on feature extraction is expected. LiDAR's intensity data are part of the research related to attribution of features.

Ms. Terziotti added that USGS will integrate NC elevation data in The National Map as 1-meter DEM, and source files will be downloadable. Regarding contours, a pilot effort is underway on derivative products from point clouds. She will find out more on that.

- *HYDROGRAPHY*

Cam McNutt of the NC Department of Environmental Quality (DEQ) reported progress on a new application for downloading DEQ hydrography data. Meanwhile, the named streams dataset has been updated with 2016 assessment information and water quality rule classifications; this will be available for download soon. Regarding field work, DEQ has developed an application that can be used on a smart phone for stream calls. Testing is underway. DEQ is developing stream determination tools in two versions, one for staff that requires training and one for citizen scientists that does not require training. More applications are in development. He will provide an update next time on progress with the Headwater Stream Spatial Dataset.

- *GEODETIC CONTROL*

Gary Thompson confirmed a fixed plate solution for the new datum, not a dynamic solution based on velocity. The fixed plate solution will likely be updated every ten years to compensate for movement of tectonic plates. He displayed the new reference frame names realized by GEOID2022: NAD 83 becomes North American Terrestrial Reference Frame (NATR2022) and NAVD88 becomes North American-Pacific Geopotential Datum of 2022 (NAPGD2022). He explained that the NAD 83 origin (the earth's center of mass) will shift about 2.24 meters to the 2022 origin. The estimated horizontal change

from NAD 83 to the new reference frame will be between 1.0 and 1.1 meter in North Carolina. The estimated ellipsoid height change from NAD 83 to 2022 will be between minus 1.4 and minus 1.3 meter in the state. The approximate change from NAVD 88 to the new vertical datum is predicted to be minus 0.25 meter. This will involve training of users to prepare and adjust to the changes in 2022.

The new geoid model requires gravity data. NC Geodetic Survey is collaborating with National Geodetic Survey's "GRAV-D" project to create a gravimetric geoid accurate to 1 centimeter where possible using airborne gravity data. The overall target is 2-centimeter accuracy for orthometric heights from Global Navigation Satellite Systems and a geoid model. In North Carolina, data were collected in zone ES10 (the western third of NC) using an optionally piloted aircraft system (Centaur). A hybrid mode was used in North Carolina, with pilot was on board. Data were collected with a gravimeter installed on the aircraft. Also, NC Geodetic Survey is collecting gravity data from the ground using relative and absolute gravity meters. Mr. Thompson emphasized the value of metadata for data collection and successful transformation.

- *GOVERNMENTAL UNITS*

Regarding county boundaries, Gary Thompson reported that plats have been recorded for county boundary surveys between Mitchell and Yancey and between Greene and Lenoir. Reports have been submitted to seven other projects, and six other projects are in progress. Also, NC Board of Elections is encouraging resolution of county boundary discrepancies. NC Geodetic Survey has a [web application](#) that displays the locations and status of county boundary projects.

Mr. Thompson confirmed the downloadable shapefile from NC Geodetic Survey's website now includes the re-established NC-SC boundary. Work is getting started on the NC-VA boundary. Mr. Farley confirmed that NCDOT uses the county boundary shapefile, but he added that South Carolina DOT is not using the same data, revealing some discrepancies in road centerlines and affecting road maintenance agreements near the border. The states are collaborating.

Regarding municipal boundaries, Mr. Farley reported that Fiscal Year 2017 municipal boundaries are complete and will be available for download February 12 from NCDOT. The data and service are discoverable on NC OneMap also. This is the one and only published geospatial representation of statewide municipal boundaries. It is based on the Powell Bill. Municipal boundaries are maintained independent of county boundaries. Municipal boundaries are comprehensive and tend to be current and complete given the Powell Bill reimbursements from NCDOT for road maintenance and the local incentive to fully represent the extent of incorporated areas.

Under current laws, dual local submissions are called for: annexations to the Department of the Secretary of State and boundaries to NCDOT. Ultimately, there may be one submission for a collaborative process, but that would require changes in legislation. Mr. Bridgers added that he reports annexations submitted to his office to the involved county or counties to be sure jurisdiction boundaries within counties are current for sales tax

collection and distribution purposes. He also sends copies of documents received to NCDOT as another source for annual maintenance of Powell Bill municipal boundaries. Submissions to the Department of the Secretary of State should include an “accurate map” but geospatial files are rare. Mr. Farley added that Powell Bill submissions from municipalities are a mix of geospatial data and documents that may include surveys. Maintenance processes apply the various sources to produce an annual updated dataset.

Mr. Farley noted the value of modernizing the processes for consistency for state and local government purposes and for Census 2020. He proposed that SMAC evaluate opportunities and requirements for more efficient submission and maintenance of municipal boundaries.

On the topic of Census 2020, Alice Wilson pointed out the upcoming workshops next month for the annual Boundary and Annexation Survey for which the Department of the Secretary of State is the lead agency in NC.

- *TRANSPORTATION*

John Farley reported that the next quarterly publication date for roads is February 12, including road characteristics and routes and map services. NCDOT has ten editors updating roads data daily based on highway projects and other sources. The goal is to catch up with a backlog of edits this calendar year. He noted that for system roads (85 percent of all roads) NCDOT maintains 74 attributes. The GIS Unit is responsible for the geospatial representation of roads along with a few attributes. The majority of attributes come from the Office of Asset Management which has a backlog of work to catch up on before the published road centerlines have full attribution.

- *ADDRESSES*

David Giordano (CGIA) reported the *AddressNC* project is on hold while hiring a project manager is in progress.

Geospatial Data Act

Tim Johnson provided an update on the Geospatial Data Act of 2017. Senate Bill 1253, previously discussed by SMAC, was replaced with Senate Bill 2128 introduced on November 15 (GIS Day) a week after the last GICC meeting. The Council Chair asked Council members to review the new version, and comments were received through the end of November. In December, the Management & Operations Committee reviewed comments, discussed the bill and concluded the Council should issue a letter of support for the new version as being more in line with what the Council would like to see happen at the federal government level. For example, the Act would codify the National Spatial Data Infrastructure (NSDI), acknowledge the roles of state and local governments in that process, provide more accountability and compliance by federal agencies in the NSDI, ensure local governments will be included on the National Geospatial Advisory Committee, and direct federal agencies to have meaningful partnerships with state, local and tribal governments, institutions of higher education and the private sector. The GICC Chair and staff drafted a letter of support for the Geospatial Data Act and submitted it to the State Chief Information Officer for review. In the meantime, the Act has sponsors in the House and Senate and there is a companion House Bill 4395. Senate Bill 2128 is currently in the

Senate Commerce, Science, and Transportation Committee.

Senate Bill 2128 differs from the previous version (S.1253) in ways that remove elements that were sources of disagreement related to federal procurement. Also, the definition of geospatial data is less broad in the new version and likely to be easier to support by geospatial interests. Once the letter from the Council is final, there may be an opportunity to engage the North Carolina congressional delegation to broaden support.

Working Groups

Working groups reported on activity in the last quarter.

WORKING GROUP FOR ROADS AND TRANSPORTATION

Mr. Farley reported on behalf of the co-chair of the working group, Erin Lesh. The group is comparing the Council-adopted road centerline standard (2005) with the National Emergency Number Association (NENA) standard for centerlines and has prepared a crosswalk. The working group will propose an update to the state standard.

Related to standards and transportation, Mr. Farley added that local road data that satisfies NCDOT's business need for locally managed street centerlines for maintenance of its aggregated statewide dataset of all public roads may be the same data needed to support Next Generation 911. He sees an opportunity to coordinate data management in ways that result in a single process for local governments to meet multiple needs. His understanding is that most local data managers maintain one roads dataset for public safety and all other local purposes, making an opportunity for coordinated data sharing. Dual reporting systems are to be avoided. NCDOT is willing to modify its process to be consistent with needs for Next Generation 911.

METADATA COMMITTEE

Jeff Brown reported on behalf of Sarah Wray, chair of the committee. Since the last SMAC meeting, committee members Jeff Brown, Lynda Wayne, and Sarah Sheldon presented to the Mountain Regional GIS Alliance (MRGAC), with an action item to follow up with the group to arrange a training session. Attention to metadata editing and management in ArcGIS Online included consultation about experiences in the Department of Environmental Quality. Also, new layer-based metadata in ArcGIS Online is expected to be released early in 2018.

Sarah Wray, Chelsea Duncan, and Dr. Tim Mulrooney presented at the NC State University Center for Geospatial Analytics Studio in late October. Work by Dr. Mulrooney since November included a training session at NC Central University, a presentation at the NC Geographical Society Meeting, and a presentation at the Southeast Geographer's Meeting. Dr. Mulrooney and Chelsea Duncan have an abstract accepted for the AASHTO GIS-T symposium in Little Rock, Arkansas in March.

Next steps are to work with Dr. Mulrooney to establish training sessions through the summer, schedule the MRGAC training session, and work with Esri and committee members on guidance for ArcGIS Online users.

Hope Morgan commented that different federal agencies have different metadata templates for LiDAR deliverables. She would like to see the templates for all data types and agencies related to state projects available from one place for efficiency and consistency. Mr. Brown will report that suggestion to the committee.

STREAM MAPPING ADVISORY COMMITTEE

Cam McNutt (NCDEQ) reported that the Environmental Management Commission has not released water quality rules for public review yet and a schedule for release is not available. The Stream Mapping Advisory Committee's strategy continues to be to engage the GICC when the rules go out for public comment, especially if previous language about the GICC approving stream maps carries over to the new rules.

This spring, the Stream Mapping Advisory Committee intends to get caught up on issues including watershed boundaries. There are concerns about maintenance of watershed boundary datasets. DEQ uses watersheds to determine where specific rules apply. Coordination is vital between DEQ and USGS regarding boundaries as well as attributes on streams that can affect where rules are applied. In an extreme case, a development grading plan can modify which river basin applies to the site.

ORTHOIMAGERY AND ELEVATION

Gary Thompson reported the working group met January 22 and heard updates on the Statewide Orthoimagery Program by Ben Shelton, National Agriculture Imagery Program (NAIP) by Dan Madding, and Statewide LiDAR by Hope Morgan. There was discussion about color infrared imagery and what would be required to derive color infrared from the imagery collected for the Statewide Orthoimagery Program as well as rough estimates of costs for products. The group will update its 2011 paper on color infrared imagery and related business needs.

On the topic of NAIP, Dan Madding informed SMAC about the current situation for acquisition and data sharing. The US Department of Agriculture's Farm Service Agency produces NAIP imagery nationwide as 4-band, 1-meter, leaf-on imagery. Its internal use is for mapping farm fields. There are many external users including federal partners. Funding issues among NAIP partners prompted the Farm Service Agency to lengthen its planned acquisition cycle to three years (one-third of nation annually) and to consider a new model of licensed fee-based access to the imagery instead of free public access. A decision is expected by May.

On a related topic, Mr. Madding explained that vendors are already in the business of offering subscriptions to imagery. He learned that the contractor that acquired NAIP imagery over North Carolina captured the imagery at 1-foot ground resolution (implying the NAIP products were resampled to 1-meter resolution). Valtus offers a subscription to an image service based on NAIP data at the higher resolution. Mr. Farley observed that the latest available imagery is valuable to NCDOT and other agencies, making it worthwhile to explore state licensing of products like NAIP if that is possible. Mr. Madding cautioned that licensing could be costly depending on number of users.

Mr. Madding drafted a one-page description of the situation. Mr. Thompson offered to request review and comment by the Working Group for Orthoimagery and Elevation, collect more information, and share it with SMAC. Mr. Johnson added that the National States Geographic Information Council meets in late February and is likely to discuss this topic.

Mr. Farley and Ms. Morgan commented on potential for a combination of color infrared imagery and LiDAR to classify land. For example, classification of impervious surfaces, wetlands, and vegetation would benefit from color infrared imagery along with elevation.

NC BOARD ON GEOGRAPHIC NAMES

Tim Johnson, chair of the board on an interim basis, reported the board is meeting on a quarterly basis. Three of the seven members are new to the board, so the board is taking time to understand the process and to learn about naming of features. For example, Cam McNutt explained the stream naming process in the Department of Environmental Quality. At the meeting in December, the board considered two naming requests.

1. Buck Creek Barrens

Case Summary: This proposal is to make official the name Buck Creek Barrens for serpentine barrens located near Buck Creek in Clay County. As with the three barrens named in Maryland (Bare Hill Barrens, Cherry Hill Barrens, and Pilot Barrens), the proponent believes the name should be made official to recognize local usage and so that scientists can refer to the feature. According to a U.S. Forest Service website, the area is being restored and is a “physiognomic patchwork of forest, dense grass patches and partially open woodland in a serpentine site surrounding Buck Creek... on the Nantahala National Forest.”

The board found this proposal to provide a more descriptive name for this feature in Clay County on federal land. North Carolina’s Natural Heritage Program and the US Forest Service gave favorable reviews to the name.

NCBGN Recommendation: Approval

Voted: The name Buck Creek Barrens is approved.

2. Pittman Pond

Case Summary: This proposal is to make official the name Pittman Pond for a small reservoir located near Fairmont in Robeson County. The name would honor Pat Lewis Pittman (1930-1984), who according to the proponent was a “well-known and liked farmer” and a leader in the community and the church. The proponent reports that the proposed name has been in local use since the 1950s when Mr. Pittman constructed the reservoir. He adds, “In addition to caring for the land, [Mr. Pittman] was a great humanitarian for his friends and family around the town.” He was born on the property on which the reservoir is located, which had been owned by his family since the early 1900s. He managed the farm, was employed as a farm manager at a local bank, and at the

local tobacco market. GNIS lists seven features in North Carolina with the word “Pittman” in their names; most are churches or cemeteries and none are in Robeson County.

Mr. Johnson added that Robeson County concurs with the proposed name. The board concluded that even for small water features like this one, in general it is better to have a name than not. Mr. McNutt added that the Division of Water Resources is encouraging stream naming in restoration areas to replace “unnamed tributary” with names to help engage residents in the restoration process.

NCBGN Recommendation: Approval

Voted: The name Pittman Pond is approved.

Regarding recommendations on proposed geographic names in general, the NCBGN is guided by local opinion, historic considerations, agency opinions, and purpose of the name. For example, names proposed for commercial purposes did not satisfy criteria in cases in recent years. The board is working to develop consistency in applying criteria to proposals, including documentation. Two new proposals are on the agenda for the next board meeting (March 14).

2022 REFERENCE FRAME

Gary Thompson plans to bring the working group together next month now that direction from the National Geodetic Survey is established. Informing geospatial data managers will be a focus.

WORKING GROUP FOR LAND COVER

Kenneth Taylor reported on progress by the working group. The group met and reviewed and refined a draft survey document. There is much interest among the 23 members as well as experience to share by local and state GIS analysts. The survey was issued in January to a targeted audience, with 36 responses to date. The next meeting will include review of the results to date, identification of more potential respondents, and next steps toward a report on business needs for land cover. The group members have technical information to share about classifying land cover as well.

Dr. Taylor requested SMAC approval of the charter for the Working Group for Land Cover as presented to SMAC for review and comment in October. No changes in the charter were proposed since that time.

Voted: The Charter for the Working Group for Land Cover is approved and adopted.

Regular Status Updates

NATIONAL GEOSPATIAL PROGRAMS OFFICE

Silvia Terziotti reported that the 3-D Nation elevation requirements and benefits study is a joint effort by NOAA and USGS. It will be similar to the National Enhanced Elevation

Assessment (NEEA, 2012). The effort is closer to getting started, with a committee in formation. She confirmed that Gary Thompson is willing to be the state champion. Scott Lokken (chair of NC's Federal Interagency Committee) will be the National Geodetic Survey advisor. The elevation study will include riverine and coastal bathymetry. Questions will relate to topics such as resolution needs, quality level, derivative products, accuracy, and quantifiable benefits. After a survey, there will be a workshop to review responses. Ms. Terziotti would like to encourage participation by the NC GIS community in the survey and the workshop. How to determine participants in the survey will be considered by Ms. Terziotti and Mr. Thompson. In workshops, the wider the representation the better. She requested SMAC support for this endeavor.

NC ONEMAP

David Giordano reported release of 2017 imagery in December. He opened the NC OneMap Geospatial [Portal](#) and demonstrated how to find and get access to the imagery services and downloadable tiles. He also displayed ways to determine the date of imagery in a location of interest.

In-Meeting Task Review

Mr. Thompson summarized today's tasks as (1) analysis of optional solutions for contours by the Working Group for Orthoimagery and Elevation, (2) the same working group will review and comment on Dan Madding's one-page NAIP document, and (3) the Metadata Committee will consider serving additional metadata templates based on federal project requirements.

Adjourn --The meeting adjourned at 3:15 PM.

2018 SMAC Meeting Dates

Wednesday, April 18

Wednesday, July 18

Wednesday, October 17

Locations and times to be determined in consultation with the Chair.