

ORSSAB Has Open Discussion About Board Operations, Participation, and Membership

The Oak Ridge Site Specific Advisory Board (ORSSAB) had a different kind of meeting in November. Instead of the typical format of a presentation on a Department of Energy (DOE) environmental management (EM) topic and then a business portion of committee reports at the DOE Information Center, the board met in a banquet room at the Olive Garden Restaurant in Knoxville.

The purpose of the change was to have a facilitated discussion about different ways to conduct board meetings, how to improve board member participation, and how to recruit a more diverse group of board members.

Jenny Freeman facilitated the discussion of four principal topics:

- Membership
- Voting
- Frequency of meetings
- Format of meetings

On the topic of membership, Chair Dave Hemelright said for some meetings there haven't been enough members present to vote on recommendations.

Susan Cange, the board's Deputy Designated Federal Officer, said another challenge has been eliciting sufficient interest in enough people of diverse backgrounds to apply for membership. She said DOE wants to have a good mix of people regarding backgrounds, education, ethnicity, gender, and geographic representation.

Freeman asked if 22 members were enough to conduct board business, especially regarding having enough members to vote on recommendations. Board member Greg Paulus noted that 15 of the 18 current members were present. He suggested filling the remaining seats and striving for an average of 18 at each meeting. The board has been conducting a recruitment campaign to fill the four open positions, and Ms. Freeman encouraged board members to help recruit for those spots.

Board members discussed the possibility of changing the requirements for voting on recommendations. Currently a quorum to vote on recommendations requires



Susan Cange, ORSSAB's Deputy Designated Federal Officer, wants more people with diverse backgrounds to apply for seats on the board.

Issue 57• January 2015 IN THIS ISSUE

EM & Stewardship Field Trip2
WIPP Update
25 Years of EM Successes4
SSABs Around the Country5
Reservation Update6
Snapshot in History6
Board Member Profile: Greg Paulus7

that three-quarters of members be present and two-thirds of those must vote to approve a recommendation.

Two ideas were suggested: reduce the number needed for a quorum or allow absentee voting. The board's Executive Committee will consider the ideas and bring a proposal to the board for discussion.

The board normally meets 10 times a year and Freeman asked if that was adequate. Members had different ideas with some saying every other month was sufficient, while others felt like the board had enough to keep it busy for 10 meetings.

The group reviewed the scheduled topics for FY 2015 and decided to stay with 10 meetings. Some of the meetings could consist of field trips to locations where EM work is being done, and members could see for themselves the sites they have heard about through presentations at the DOE Information Center.

Regarding the format of meetings, Hemelright asked if the presence of television cameras inhibited discussion.

(Continued on page 8)



EM & Stewardship Committee Members Take Field Trip to ETTP

Members of the ORSSAB EM & Stewardship Committee went on a field trip to East Tennessee Technology Park (ETTP) in November to see the area that is being considered for a record of decision (ROD) on remediation of contaminated soils.

DOE has issued a proposed plan to remediate soils in several areas of a large plot of land at ETTP known as Zone 1. ETTP, which was the site of uranium enrichment activities, is divided into two zones. The main industrial complex of the site where

the enrichment process buildings and most of the auxiliary support buildings were located is Zone 2. Zone 1 surrounds Zone 2 from the south to the west and north and a small section to the northeast.

The zones were delineated by levels of contamination and what activities occurred there. Zone 1 was used for light industry and some waste management and is less contaminated than Zone 2.

A remedial investigation/ feasibility study identified Dave Adler several areas in Zone 1 remediation that could pose future risks to human health and the environment. They include the K-720 Fly Ash Pile and the K-770 Area in the southwest section known

as the Powerhouse Geographic Area; the Contractor Spoils Areas in the north; and the Duct Bank Corridor, which runs from Duct Island that is surrounded by Poplar Creek to the K-1007 North Area, which is adjacent to the southern boundary of Zone 2.

Participants on the field trip included committee co-chairs Bob Hatcher and Corkie Staley, and board members Alfreda Cook, Greg Paulus, and student representative Claire Rowcliffe. Public members of the committee included Dale Bignell, Susan Gawarecki, David Martin, and Bob Olson. Prospective member Dennis Wilson toured as well. The group was led by Dave Adler, ORSSAB's Alternate Deputy Designated Federal Officer.

Adler explained that Zone 1 has been transferred from DOE's ownership to the Community Reuse Organization of East Tennessee (CROET). CROET has been selling and leasing parcels of land in Zone 1 for industrial development. However, Adler said it's difficult to and the environment. According to the proposed plan, use for all of ETTP is industrial, with areas of Zone 1 preserved for ecological habitat. The RAO for soil in Zone 1 is protection of future industrial workers and the protection of terrestrial wildlife.

Adler said DOE and CROET also want to "capture other values such as conservation for recreational use like hiking and the preservation of historical features. So essentially it's a three-prong end-state consisting of redevelopment, conservation, and

historical preservation and interpretation."

The proposed plan presents four alternatives to address the cleanup. With the exception of the 'no action' alternative, the other alternatives provide different ideas for tackling the problem areas.

The preferred alternative calls for additional land use controls and covers for K-770, the Contractor Spoils Area, K-720 Fly Ash Pile, and the Duct Bank, and the removal of

Dave Adler, DOE, second from right, points out an area that is targeted for remediation under a proposed plan for soils in Zone 1 at ETTP.

recruit businesses to an area that has some residual contamination. Adler said the basic input from ORSSAB that DOE seeks is:

- What is the end state for Zone 1?
- What land use restrictions should be in place?

"There is an argument that the land is largely clean," Adler told the group. "It has been thoroughly characterized and is suitable for redevelopment to a depth of 10 feet." But there are pockets like those mentioned earlier that pose risks.

Remedial Action Objectives (RAOs) in the proposed plan state the general objective is protecting human health some small ecological risk areas.

The proposed plan says the preferred alternative provides the best options for cost, effort, and permanence. The next step is for DOE to review input from the Environmental Protection Agency, Tennessee Department of Environment and Conservation, and the public, including a recommendation from ORSSAB, which will be drafted by participants of the field trip.

After all parties agree on a plan to move forward, a ROD will be signed documenting what the cleanup steps will be. The milestone for the ROD is May 2015.

DOE Continues to Work With TRU Waste During WIPP Shutdown

In February 2014 two incidents at the Waste Isolation Pilot Plant (WIPP) in New Mexico caused the shutdown of the only facility in the U.S. that permanently disposes of transuranic (TRU) waste. TRU waste is disposed in shafts, or drifts, about a half-mile below ground in an ancient salt bed. Some of that waste has come from Oak Ridge.

After months of investigations into the cause of a truck fire and a radiological release two weeks later, DOE released a recovery plan at the end of September that outlines the steps necessary to resume limited waste operations in the first quarter of 2016.

According to a statement on WIPP's website "Key elements of the recovery plan include strengthening safety programs, regulatory compliance, decontamination of the underground, increasing ventilation, mine stability and underground habitability, and additional workforce retraining."

The recovery plan itself says "the schedule to commence waste emplacement operations is the first quarter of calendar year 2016, with the intent to incrementally increase waste emplacement operations over time. Options are being explored to determine if some actions can be accelerated."

The recovery plan estimates the cost to do everything needed to resume limited operations to be about \$242 million, but that doesn't include two additional capital projects to restore WIPP to full operation: 1) a new permanent ventilation system, with an estimated cost range of \$65 million–\$261 million, and (2) a supporting exhaust shaft, with an estimated cost range of \$12 million–\$48 million. The wide range is explained as being preliminary estimates that will be refined as detailed planning is developed and uncertainties are reduced. DOE EM in Oak Ridge had been sending TRU waste for disposal at WIPP before the incidents. It was sending two types of TRU – contacthandled (CH) and remote-handled (RH). CH TRU can be manipulated directly with proper personal



A worker manipulates RH waste at the TWPC.

protection. RH TRU is higher activity material and must be handled mechanically.

Of Oak Ridge's original inventory of 1500 cubic meters of CH, about 97 percent has been processed at the TRU Waste Processing Center (TWPC), and about 68 percent of the inventory has been sent to WIPP.

There were about 560 cubic meters of RH TRU at TWPC. About 78 percent has been processed and 25 percent has been shipped.

Disposition amounts include material sent to WIPP and other waste determined to be low-level that is shipped to the Nevada National Security Site or commercial facilities.

"Following the WIPP shipment suspension, we worked with our contractor, Wastren Advantage, Inc., to develop and implement a plan that allows continued progress toward meeting our Site Treatment Plan (STP) commitments with the state," said Laura Wilkerson, Portfolio Federal Project Director for the TWPC. "The plan for handling TRU in the interim involves continued processing and characterization of CH waste and then using existing storage facilities at Oak Ridge National Lab to stage the waste until shipments to WIPP resume," said Wilkerson.

What to do about RH waste is a little trickier. "We have very limited storage capacity at the TWPC for RH TRU," said Wilkerson. "That requires us to re-sequence the high dose waste processing and put the near-term focus on processing RH casks with low dose wastes that can be treated as CH." She said DOE is working on obtaining concrete overpacks that RH waste canisters can be stored in and staged at the lab after the waste has been characterized and processed.

Wilkerson said while STP milestones have been impacted because of the WIPP shutdown, she said DOE has been communicating the situation with the state and believes there is basis for renegotiating the milestones.

Reports Available



ORSSAB's Annual Report and DOE's Cleanup Progress Report are available online at energy.gov/ORSSSAB, News and energy. gov/orem/about-us/news.

Advocate

Public Has Several Ways to Learn About 25 Years of EM Successes

DOE's EM Program began 25 years ago. Over the course of its history, the men and women within the organization have completed numerous accomplishments at cleanup sites throughout the country.

At the Fall 2014 EM SSAB Chairs' Meeting in Idaho, Mark Whitney, DOE's Principal Deputy Assistant Secretary for EM, reminded participants about the advancements employees are achieving. "We still have a lot of challenges, so it's easy to forget the progress that has been made."

Whitney mentioned the completion of the K-25 demolition project and the work underway to take down K-31 and K-27. He also discussed the progress happening at other cleanup sites across the U.S. "Many sites have been closed and the EM footprint has been reduced by 90 percent since EM was established," he said.

The chairs representing the eight advisory boards that comprise the EM SSAB were also considering EM's accomplishments, and they believed the agency should do more to tout its successes. In a recommendation drafted by ORSSAB leadership, the chairs listed additional accomplishments since 1989:

- Closing and demolishing the uranium enrichment plant in Fernald, Ohio. The cleaned site is now a parkland.
- Cleaning the highly contaminated nuclear weapons production facility in Rocky Flats, Colo., and converting the area into a wildlife refuge.
- Completing the B Reactor Preservation Project at the Hanford, Wash., site, which is being considered for national historic preservation.

In the recommendation the chairs stated, "In every case of EM site remediation, the environmental recovery constitutes a powerful example of how the joint efforts of DOE and community leaders have resulted in a return to the local community and to society of areas or facilities previously exposed to or contaminated by nuclear activities."

The chairs said the agency should find ways to enhance how it publicizes DOE EM's accomplishments. They



The final demolition of K-25 at ETTP and clearing of debris from the site was a major accomplishment for DOE EM in 2014.

suggested that DOE should produce video

clips or documentaries and make them available to the public and academia. They also suggested that individual sites should produce materials and provide them to local media and other interested parties to address any local issues and concerns.

The chairs said such communication tools "would help DOE EM to further capitalize on the presentation of past and emerging EM sites to inform the public about cleanup activities at former nuclear sites which would help maintain support for environmental cleanup."

DOE EM agreed with the EM SSAB's emphasis on communication. In his response to the recommendation, Whitney said the EM Office of External Affairs has been working with field sites to develop materials such as news flashes, newsletters, and fact sheets, and it has also increased its presence on social media. "Many of our field sites have established online libraries and channels that contain short, project-specific vignettes, as well as long multimedia presentations like *Oak Ridge Environmental Management: 30 Years in 30 Minutes* and *The Hanford Story.*"

Whitney also said DOE EM launched an interactive timeline in 2014, which is a compilation of photos and videos chronicling hundreds of cleanup accomplishments and historic events from the Manhattan Project to the present. The timeline is available at

http://energy.gov/em/ articles/em-historicaltimeline.

DOE Oak Ridge has its own EM website at <u>http://energy.gov/ orem/oak-ridge-</u> office-environmentalmanagement. "This is where people can find the latest news and news archives, along with all of our publications, such as

the Cleanup Progress Report, Public Involvement Plan, and The Annual Site Environmental Report," said Ben Williams, DOE Oak Ridge Office of Public Affairs. "We also have Facebook, Twitter, and Flickr accounts that share the latest developments."

In addition, DOE EM issues a monthly *EM Update* newsletter that includes updates and accomplishments from all of the cleanup sites within the complex. Members of the public can sign up for these email updates either on the Oak Ridge Office of EM homepage or the EM HQ homepage at <u>http://energy.gov/em/officeenvironmental-management</u>.

Using the feedback and perspective of the EM SSAB, DOE EM continues refining its communications venues and searching for best practices to share its projects and progress with the widest audience possible.

Eight Boards Comprise the National EM Site Specific Advisory Board

ORSSAB is one part of seven other boards that comprise the national Environmental Management Site Specific Advisory Board. The other boards are located in Idaho, Kentucky, Nevada, New Mexico, Ohio, South Carolina, and Washington state. While each board interacts with DOE on EM issues in their respective states, they all have different challenges.

Idaho

The Idaho National Laboratory Site Environmental Management Citizens' Advisory Board (CAB) is composed of 12 members who represent

communities throughout southern Idaho. The CAB meets four times a year.

The Idaho CAB's current focus is on the shutdown of WIPP and the effects that is having on TRU waste disposition. The CAB monitors sodium-bearing waste treatment and the startup of Idaho's Integrated Waste Treatment Plant. It

is interested in pending procurements for Idaho EM activities, as well.

Kentucky

The Paducah Site in western Kentucky began uranium enrichment in 1952 and ended in May 2013. Deactivation of the process buildings began in October 2014.

The Paducah CAB, with a current membership of 17, meets about six times a year.

The CAB is working with the DOE site office to keep the community informed during this transition period of deactivation to eventual decontamination and decommissioning.

Economic stability is important to the community and there is uncertainty about future operations or use of the site when decommissioning is completed.

Nevada

A total of 928 atmospheric and underground nuclear weapons tests were conducted at the Nevada National Security Site (NNSS) in support of national defense initiatives between 1951 and 1992. The Nevada SSAB (NSSAB) has provided citizen input to the DOE Nevada Field Office regarding EM activities at the NNSS since 1994.

The NSSAB strives to have between 15 - 20 members. Meetings are based



The national DOE EM SSAB is composed of eight site specific advisory boards throughout the United States.

on the NSSAB's annual work plan, but are typically held every other month in Las Vegas or rural communities surrounding the NNSS.

NSSAB recommendations to DOE focus on groundwater, radioactive waste management/transportation, soils and infrastructure remediation, public outreach, membership, and budget.

New Mexico

The Northern New Mexico (NNM) CAB currently has 19 members from across the region. The NNM CAB bi-monthly meetings are held at different cities from Taos to Albuquerque, including four sovereign Pueblos.

The NNM CAB is currently focused on the breached drum from Los Alamos National Lab (LANL), which was the source of the radiation leak in February at WIPP. In addition, the NNM CAB is monitoring a chromium plume, which closely borders the Pueblo of San Ildefonso. Recently, there was an announcement that the cleanup program at LANL was being moved from DOE's National Nuclear Security Administration to DOE EM. This is a significant change at LANL, and the NNM CAB will be very involved with this transition.

Ohio

The Portsmouth Site, located in southern Ohio, began enriching uranium in the mid-1950s. Although

> cleanup work began in 1989, enrichment continued until 2001.

The Portsmouth SSAB is encouraging DOE to explore ways to recycle and reuse as much material and resources as possible.

The board is also working with DOE on the building of an on-site disposal facility.

The 18-member board meets six times a year.

South Carolina

The Savannah River Site (SRS) CAB currently has 20 members but can seat as many as 25. Members are drawn

from the areas surrounding SRS and areas affected downstream along the Savannah River. The board meets six times a year.

The SRS CAB monitors the SRS High Level Radioactive Liquid Waste Program and is concerned about enforceable milestones to close two high level waste tanks. Missed milestones will increase the risk to the environment and workers, as well as increase life cycle costs.

Another area of concern is continued receipt of spent nuclear fuel and accumulation of nuclear waste. Area citizens are concerned that SRS may become a long-term repository. There is no final disposition path for vitrified

(Continued on page 8)

Advocate

Reservation Update

Demolition Begins on K-31

Demolition of the K-31 Building at ETTP began in early October. The 750,000 square-foot uranium enrichment facility was the fourth of five such buildings built on the site in the early 1950s. It is also the fourth of the five to be demolished following K-29, K-33, and K-25.

Original estimates were that it would take about a year to complete demolition, but Ken Reuter, president of UCOR, DOE's Oak Ridge cleanup contractor, said in November that the project was already ahead of schedule, and he thought the job may be finished by early summer 2015.

While K-31 is being dismantled, K-27, the last of the enrichment buildings to come down, is being prepared for demolition.

Decision Made on Oak Ridge Research Reactor Pool Leak

In September a leak was discovered from the reactor pool at the Oak Ridge Research Reactor at Oak Ridge National Lab. It took a while for workers to find the leak, which was coming from a ruptured aluminum line at the bottom of the pool.

After evaluating a number of options DOE and UCOR announced in December that items, primarily a stainless steel fuel grid plate and two thermal shields, will be removed and shipped for disposal. The disposal site has not been determined.

Mike Koentop, executive officer for the DOE Oak Ridge Office of EM, said the pool will be drained, any sludge vacuumed out, and a fixative will be applied to the inside of the pool. He said a concrete cover will be placed over the pool until the reactor facility can be demolished, which is not scheduled until the 2030s.

DOE Receives Conceptual Design for Historic Properties at ETTP

In December DOE received conceptual design drawings for historic preservation and commemoration of K-25 at ETTP. The drawings will go to signatories and consulting parties to a



After all the transite panels were removed demolition on the K-31 Building at ETTP began in early October.

memorandum of agreement on historic properties at ETTP.

The submission includes drawings of an equipment building that will be a scale representation of the gaseous diffusion process K-25 used to enrich uranium.

Designs for a history center on the second floor of the fire station at ETTP and adjacent viewing tower of the K-25 footprint are part of the conceptual design package.

ETTP Considered as a Site for General Aviation Airport

A few years ago an entrepreneur proposed building a racetrack at ETTP.

That idea never took off, but this one might. Reviews are underway to transfer about 171 acres at ETTP for use as a general aviation airport.

When the reviews are completed the General Services Administration will transfer the land to the Metropolitan Knoxville Airport Authority, which would oversee the ETTP airstrip.

Susan Cange, Acting Manager for DOE Oak Ridge EM, told the airport authority in October that if all goes well the transfer could take place by the end of 2015. The airport authority would then develop a master plan.

A public affairs consultant for the airport authority said because ETTP has infrastructure in place, all the site needs is air access to make it a prime industrial site.

The land for the airport generally runs parallel to the front of ETTP and Highway 58.

Snapshot in History

October - December 1943

In late October, construction and testing of the X-10 pile were completed. With only half the channels filled with uranium, the pile went critical in early November and produced plutonium by the end of the month.

As a result of expanding the Y-12 complex and the ongoing barrier crisis at K-25, it was decided that K-25 would play a lesser role than originally envisioned. Instead of supplying fully enriched U-235, the gaseous diffusion process would be used to produce enriched feed material to the Y-12 racetracks.

However, in December the Y-12 Alpha facility experienced such significant start-up problems that it had to be shut-down. While all tanks operated for short periods, performance was sporadic and constant maintenance was required due to electrical failures and defective parts.

Board Member Greg Paulus Served His Country and Helped People With Disabilities

ORSSAB has its own Top Gun. Board member Greg Paulus earned that distinction flying F4 fighters for the Air Force. In fact, he did it twice. He was operational in five different aircraft, a rarity itself. a bankrupt business that sold farm machinery, custom pontoon boats, and snowmobile trailers.

"The second day on the job a guy drives up pulling a pontoon boat. I was wondering how I was going to tell

Greg grew up in Milwaukee, Wis., and attended Marquette University earning a bachelor of science in mechanical engineering.

He joined the Air Force, went to flight school, and was sent to Vietnam as a forward air controller flying OV-10s. After completing his one-year tour in Southeast Asia, he returned to the states and did base facilities maintenance. He married

and started his family and ¹ the Air Force asked if he wanted to be a fighter pilot. "That's why I joined in the first place," said Greg, "so I flew F4s in Europe from 1979-81."

Then the Air Force asked him to go into procurements, so he worked with Boeing in Philadelphia learning how to determine the costs involved in building aircraft. "In the course of a year I developed a program that saved Boeing about \$20 million a year. They thought that was pretty neat."

Boeing wanted to hire him, but the Air Force still wanted him to do aircraft procurement, and it provided him an opportunity to get an MBA at Central Michigan University.

But it wasn't long before the Air Force asked him again to climb into the cockpit to test fly refurbished fighters. "Finally after 20 years in the service and four children ages 3, 4, 7, and 8, who were all born in different parts of the world, it was time to be a dad."

So Greg packed up his family and moved to Spokane, Wash., basically sight unseen, and bought

Greg Paulus with his F4 Phantom during his days as a fighter pilot in the Air Force. anted to be I joined in 'so I flew F4s him that I bought the company assets but not the liabilities, and we're not responsible for any warranties provided by the previous owner," said Greg.

"Then the guy rolls into my office in a wheelchair. He said the previous owner built a pontoon boat so he could board it in his wheelchair, but it still needed some modifications and he asked if we could make those modifications. That's how I got into the business of helping people with disabilities.

"You can't appreciate what frustrates people with disabilities because you're not in that environment. But if you listen and talk to them you can help with those frustrations," said Greg. "So we did a lot of things with our products to modify them for people with disabilities."

Eventually Greg's Metalite Industries received a grant from the Department of Education to do additional research and development and won a national small business award for his work. "We had a really good time doing that. It was a lot of fun." But Greg wanted that part of the business to be basically a break-even venture, so he used his government contracting and procurement experience to get government contracts. "I was blessed and fortunate to develop some unique products for the government.

"When you develop a reputation for being able to do strange things they send you strange things for you to do."

When the fourth child graduated college, Greg and wife Sarah decided it was time to retire. He and his family had been through East Tennessee before and they liked the area very much. Greg and Sarah bought a lot on Watts Bar Lake before retirement and moved to the area in 2008.

Soon after building their house Greg saw an ad in the local newspaper about ORSSAB, learned more about it on the board's website, and made an application. "With the house finished I needed something to do. I thought this would be a good project and I was interested in the history of what happened here."

It's been a good fit for both Greg and the board. He currently chairs the Budget & Process Committee and is an active participant at board meetings.

ORSSAB is fortunate to have another Top Gun in its ranks.





Advocate

Oak Ridge Site Specific Advisory Board January 2015

November Meeting

(Continued from page 1) The board meetings are recorded and the first hour is broadcast over several local cable channels and on YouTube.

No one indicated a problem of having TV cameras present, but Hemelright suggested they be turned off during the second half of the meeting during committee reports and other board business.

At the conclusion of the meeting, Cange said she was excited about having this type of discussion and developing ways for the board to make more informed decisions. She said she looked forward to seeing how the ideas discussed would be implemented and what the results would be.

SSABs Nationwide

nuclear waste and the future of WIPP is in question.

The SRS CAB also follows the safety culture at DOE EM nuclear sites. The SRS has never had a serious accident, but the CAB is concerned that there has been a breakdown in the way that safety and emergency response procedures are implemented in other nuclear sites around the country.

Washington

The Hanford Site sits on 586 squaremiles in southeastern Washington state. Subsequent weapons production processes left solid and liquid wastes that pose risks to the local environment including the Columbia River.

The Hanford Advisory Board (HAB) is a large one consisting of 31

(Continued from page 5)

members representing state and local government, businesses, workers, environmental, public, and citizens' groups, and tribes, plus four at-large members of the public.

The HAB is interested in a number of issues including protection of the Columbia River, groundwater remediation, worker and public safety, waste management, site reduction, future land use, and longterm stewardship. The HAB is also concerned with the condition of many underground storage tanks on the site and the construction of a large waste treatment plant.

The board generally meets four times a year and several committees meet monthly or as needed.



Oak Ridge Site Specific Advisory Board

P.O. Box 2001, EM-90 Oak Ridge, Tennessee 37831

ABBREVIATIONS

DOE — Department of Energy EM — Environmental Management ETTP — East Tennessee Technology Park ORSSAB — Oak Ridge Site Specific Advisory Board TRU— transuranic WIPP — Waste Isolation Pilot Plant Y-12 — Y-12 National Security Complex

UPCOMING MEETINGS

All meetings are held at the DOE Information Center, 1 Science.gov Way, Oak Ridge, Tenn.

ORSSAB Board meeting January 14, 6 p.m.

Committee Meetings EM & Stewardship — January 21, 6 p.m.

