# Agenda

## Santa Cruz County Advisory Panel
## on the South32 Hermosa Project
## August 16, 2023

### Santa Cruz County Provisional Community College District
### 2021 N Grand Avenue, Nogales

| *Timing* | Focus | Task/Action | Who |
|---|---|---|---|
| *11:30*<br>*30 min* | **Lunch is served** | | All |
| *12:00*<br>*5 min* | **Welcome** | | Catherine |
| *12:05*<br>*0 min* | **July Minutes –** Pending | No action | Catherine |
| *12:05*<br>*25 min* | **Project Updates**<br>• Ongoing Permitting and Site Activity<br>• Workforce/Procurement<br>• Traffic/Trac Out<br>• Water/Dewatering Options<br>• Fast-41 Dashboard<br>• Additional timely updates | Share information, Q & A<br>Note: Generally, up to three of the topics listed will have an update. If there is no new information, there will be no update. | South32 |
| *12:30*<br>*15 min* | **Community/Panel**<br>• PARA - Carolyn<br>• Town of Patagonia Flood and Flow Committee - Carolyn<br>• FOSCR – Ben<br>• Other? | Share information, Q & A | Panel Members |
| *12:45*<br>*15 min* | **Standing Topics:**<br>• CBA (Community Benefit Agreement)<br>• Q&A Document | Share information, Q & A | Catherine, Panel Members, South32 |
| *1:00*<br>*55 min* | **Check-in with Dr. Ferre via Zoom** | Discussion | Dr. Ferre |
| *1:55*<br>*5 min* | **Wrap Up**<br>September Location – Nogales (SCCPCCD)<br>11:00 am-12:00 pm – Lunch/Panel Business<br>12:00-2:00 pm – Dr Ferre (in-person) | Final Comments | Catherine |
| *2:00* | **End** | | All |

Meeting Minutes for August 16, 2023

# Santa Cruz County Advisory Panel on the South 32 Hermosa Project

Santa Cruz County Provisional Community College District, 2021 N Grand Avenue, Nogales

The meeting was called to order at 12:00 by Catherine.

**Attendance:**

**Meeting Facilitators (Interfuse Associates):**
Catherine Tornbom, Joanne Lamb

**South32 Hermosa:**
Judy Brown, Tomas Goode (via Zoom), Joe Haas, Melanie Lawson, Sandra Moraga, Garrett Workman

**Panel Members Present:**
Maureen De La Ossa, John Fanning, Gerry Issac, Ruth Ann LeFebvre, Ben Lomeli, Damian Rawoot, Fritz Sawyer, Carolyn Shafer, Linda Shore, Guillermo Valencia, Marcelino Varona, Michael Young

**Panel Members Absent:**
Olivia Ainza-Kramer, Elizabeth Collier, Christopher Young

**Consultants/Guests/Visitors:**
Alissa Koay, Jeremy Dillon, Stephanie Smith, Aaron Mrotek, Laura Monh

**Presenter:**
Dr. Ty Ferre (via Zoom)

1. **Meeting Minutes - Catherine**

   The July minutes were approved via email. Talley Sheet attached.

2. **Project Updates (Attachment 1) - Melanie:**

   **2.1. Ongoing Permits & Site Activity:**

   **2.1.1. Flux Exploration Drilling Plan:** A decision memo has been approved. The start date has not been determined.

   **2.1.2. Small Tracts Act/AZPDES Permit/APP Permit/Site Exploration:** The commissioning and performance testing for Water Treatment Plant 2 (WTP2) is happening this month. It will be followed by discharge into Harshaw creek. Also, we will be conducting the discharge under the current permit which remains in effect confirmed by the Water Quality Appeals Board. There is an opportunity to have one or two people involved in shadowing a routine sampling event as required by the state. Is there an interest?

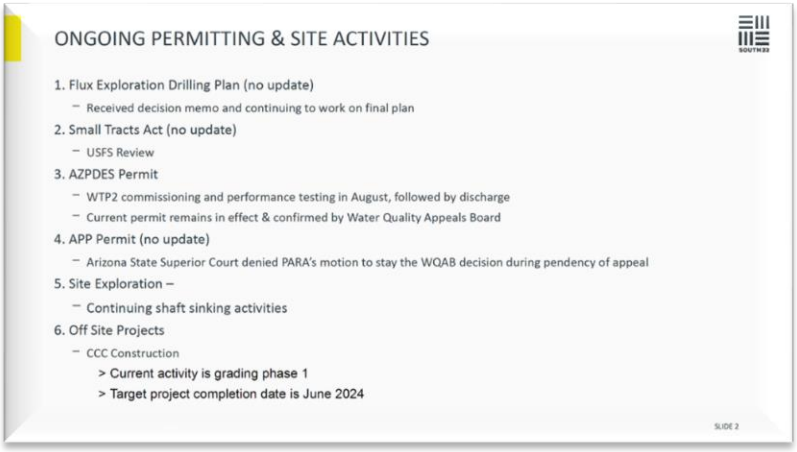
   Discussion:

   **Fritz:** *I have an interest in going up there when you first start the discharge, but after that it's totally up to you guys.*

   **Melanie**: We've previously talked about co-monitoring.

   **Linda:** *Will the result of the monitoring be published?*

   **Melanie**: They go to the state agency first. I don't know the process and timing of when it becomes public information. I will have to check on that.




   **2.1.3. Site Exploration**: We are continuing to do shaft sinking activities.

   Questions and Answers:

   **Fritz**: *You're sinking the shaft, two of them, right? And you don't call that mining?*

   **Melanie**: No. Because there is no mineral extraction.

   **Linda:** *That's when it becomes mining?*

   **Melanie:** Mineral Extraction is mining, yes.

   **Judy:** It's infrastructure.

   **2.1.4. Off Site Projects**: The main off-site project right now is the Cross Creek Connector. The project is in three phases. Phase 1 is the middle section, phase 2 is the area where it connects to Harshaw Road, and phase 3 is the area where it connects to State Route 82. We're working on some of the design criteria and features of the phase 2 intersection, doing some additional work with Kimley-Horn

to make sure sight distances and things are all accurate.

Starting the next meeting I'll update on the 9001 Bridge (this is ADOT's numbering) at Harshaw Creek Road and Hashaw Road. We had to pause construction because of breeding and nesting season for the Yellow Billed Cuckoo. That ends September 30. We plan to resume October 1st. This is why it's been sitting with the detours since the middle of May.

Questions and Answers:

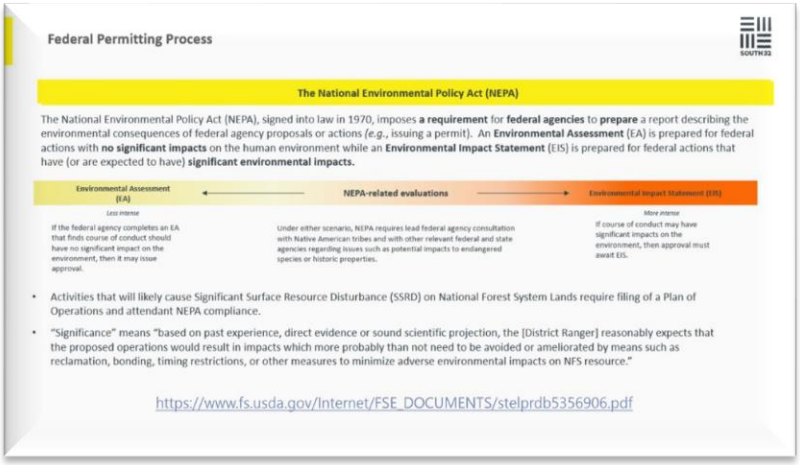
**Michael:** *On the Cross Creek connector, are you putting bridges in there?*

**Melanie:** There will be two- three temporary bridges. The one that's closer to SR82 may just be an at-grade crossing per county and other engineering requests because that's a better way to cross that area. Understanding that if it's flooding, we won't be able to get across but currently leaving site during a monsoon event there are several crossings we can't get across anyway.

**Damian:** *Any updates on Flux Canyon exploration? Is that still on hold?*

**Melanie**: It is still on hold.

**2.2 FAST-41**: This is an overview of the federal permitting process. There is a link at the bottom where you can find more information on the USDA website and some of the definitions of the terms. We plan to submit the Mine Plan of Operations to the US Forest Service in August. Once this is submitted and deemed complete, then we can share it with the panel. At the September meeting we will provide a table of contents review. Once it's submitted, the federal agencies lead the public scoping and public comment periods which will be tracked here on the FAST-41.




Questions and Answers:

**Ben:** *Do we know if it's going to be an EIS or EA?*

**Melanie:** It will be an EIS (Environmental Impact Statement). The anticipated release is scheduled for April 2024. Once we submit the Mine Plan of Operation, that will kick off an update on this website. I encourage everyone to follow along on this website.

**Marcelino:** *How is FAST-41 being looked at by your Board and everything that Pat has been doing to submit to them to get the final funding to start this mining project? And what is the progress of whether you're going to get that money or not?*

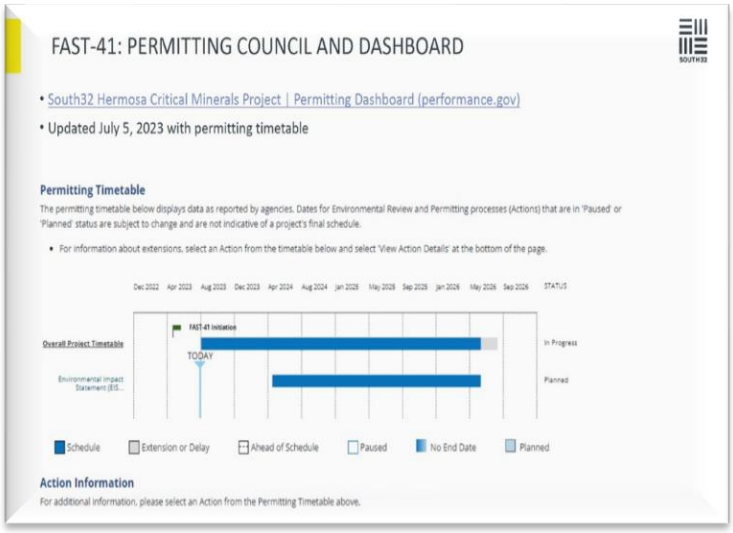
**Judy:** The board will approve Taylor, which is the zinc deposit, funding later this year. It's ahead of Clark, which is the manganese deposit, in terms of study. Generally, the Board looks upon FAST-41 as positive because it has a specific transparency with the interagency coordination between. They see that as a positive in terms of the certainty of timelines.

**Marcelino:** *Originally the approval was set for August. Now you're saying later in the year. When are they finally going to decide if they're going to fund it or not?*

**Judy:** Later during the year. It could be November or December. I don't have an exact date. The board meets 9 or 10 times a year under Australian board rules. December is a difficult time to do anything because it is summer in Australia. When they go for Christmas, it is a month-long summer vacation.

**Marcelino:** *We won't know until quarter 3 if there's going to be movement?*

**Judy:** Right. Between now and when they make the decision, we do a process called IPR (Independent Project Review), where internal teams of South32 do risk assessments,




**Melanie:** This updated timeline here at the bottom has the EIS timeline starting in April.

**Fritz:** *What's the Forest Service timeline we'd say it's deemed complete?*

**Judy:** December.

**Melanie:** Are there any other questions on FAST-41 or permitting and especially taking advantage of Judy in the room?

**Fritz:** *Do we have an update on the power line?*

**Judy:** TEP has its own permitting process. The one thing that is currently being discussed is whether to fold the powerline project into the EIS. This discussion is between the Forest Service with TEP.

**Fritz:** *Then it can go FAST track 41?*

**Judy:** Well, technically it only requires an EA, and it should be faster. But you know, things take a long time. The issue is that it'll be on a separate timeline as the EIS for the mine. But if you put them all together, then they'll be on the same timeline and you risk one delaying the other, but it requires an EA so technically, it should be a faster timeline although the Coronado National Forest usually takes about two years to do it.

**Melanie:** Unisource has their own website for the project. They have an interactive map that shows the approved routes. They explain the process and so this is probably the best resource to go and check out. [Note: the link is included here for ease of access: https://www.uesaz.com/rio-rico-to-harshaw/#:~:text=The%20Rio%20Rico%20to%20Harshaw%20Line%20will%20involve%20the%20construction,mounted%20on%20steel%20monopole%20structures.]


**Melanie**: I've shared a flyer with the group (attachment 2) for the Open House event tomorrow from 5:00 to 7:00 pm at Rio Rico High School. Pat will be there to make brief comments at 5:30 and it will be an open house format where we have other technical staff and experts there to answer questions. But as we discussed in the July meeting, we never planned to do mining in Rio Rico. We are completing location studies for two offsite facilities. These facilities don't have to be in Santa Cruz County, as we discussed during the last panel, and we are committed to economic and workforce development benefits being in Santa Cruz County. The IROC is an opportunity for apprentice-type programs and job training for youth.

**Linda:** *Speaking as a layperson, a processing plant to me is mining. I think that's what people are objecting to more than the IROC. Again, speaking for myself, is South32 willing to consider de-coupling those two so the manganese processing plant can go somewhere else?*

**Melanie:** Right. The manganese processing plant can go somewhere else. It does not have to be co-located with the remote operation center. Another potential benefit with the IROC and a park and ride facility with Hermosa planning for electric vehicles, is to have more charging stations that could be shared and there may be an opportunity for transportation grants, for example, schools might get electric buses so we can share renewable energy infrastructure at that facility.

**Fritz:** *I asked Pat where are you going to have the assay lab, where are you going to have the warehouse, and where are you going to have the machine shops? He didn't know.*

**Melanie:** The warehousing doesn't have to be with the remote operation center. We're looking where that could go as well from a logistics perspective.

**Fritz:** *You have an IROC, I get that, but you must have other facilities for mine support that must be based somewhere off the mine site because they're limited with the amount of private property so you're not going to have an assay lab up there. Because it's going to take up space. You've got tire shops, you got all that stuff for maintenance and support.*

**Melanie:** Yes, and a lot of the maintenance on equipment will be underground.

**Fritz:** *Okay, that's the mining equipment, but then you got the surface equipment, conveyor, you got the mills, you got the flotation circuit and other things. When you're going to go to the public you need to talk about the other stuff. You don't need five acres for a control room.*

**Melanie:** This is not a typical plant control room. It'll be operating half the equipment underground. We'll have 40% of our workforce there. It's also our office building.

**Fritz***: I've brought this up for discussion before, all these things must go someplace. Wherever you're going to put this stuff, you've got the potential for contamination. And that's what people are worried about.*

**Marcelino:** *When is this location study going to be complete?*

**Melanie:** It might be later this year. I can get a more definitive answer for you. As we've said, public sentiment is a part of the decision.

**Marcelino:** *That's right. I'm not about to let the IROC leave Santa Cruz County. I don't know what else is going to be a part of it, but that's a very valuable asset for the students of Santa Cruz County. Very crucial. I want to know about this study. It should be presented here so that we can take a position on it and share that position with the public.*

**Melanie:** Yes. That's the presentation that Craig Berry made to this group in November and Pat recapped at the previous meeting. We can get some additional information on Fritz's questions about what else might be included in that and we can discuss that in September. But we agree with you.

**Judy:** I can tell you that the plans right now do not include things like maintenance or warehousing as part of this IROC. It's an office building with a control room. I don't exactly know where those things are going to be. There is a limited amount of room at the Patagonia site and part of that is keep a minimal footprint.

**Ruth Ann:** *Considering the manganese facilities. What are your other options do you have besides Santa Cruz County?*

**Melanie:** We can look outside of Santa Cruz County.

**Ruth Ann***: It doesn't have to be within a certain distance?*

**Melanie:** Ideally, it would be best if it was close and then there are economic benefits that come from having the minerals processed in Santa Cruz County. But it doesn't need to be in Santa Cruz County.

**Linda:** *It could be trucked anywhere, right?*

**Melanie:** Yes. This is a good segue into my next point. I've heard a lot of community concerns around community safety. There are applicable laws and regulations that we will follow and, in many cases, with occupational health levels for manganese, the company has a more stringent standard that we will follow. And then also the Community Protection and Benefit Agreement (CPBA) is another mechanism where we can formally document in writing community monitoring for dust.

In addition to that, we will be doing a community health baseline assessment. This is something the company has been doing. I spent a couple of weeks at our operation in Colombia where they did this in the community. We will partner with an organization like the University of Arizona, College of Public Health, to do an epidemiologic profile of the community to see what the baseline conditions are. Then you can track and monitor if there is any change. And we're also looking into funding and working with the University of Arizona on research.

**Linda**: *Is that something you're committed to doing? The assessment and the research, not just studying the study, but there will be a health, community health study done.*

**Melanie:** Yes, there will be a baseline.

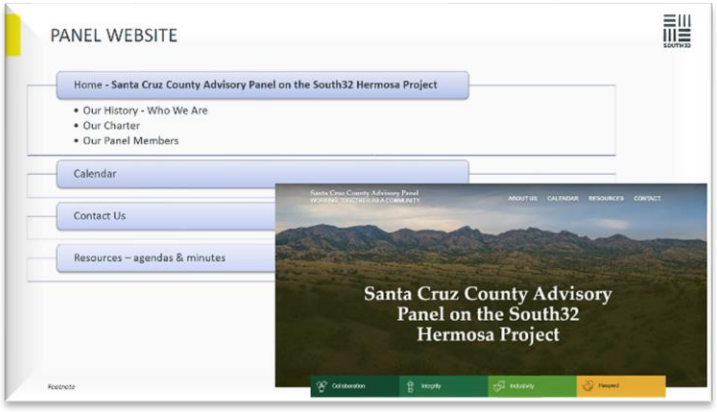
**Linda:** *Yes, we could all have manganese poisoning right now.*

**Ben:** *FAST Track 41, is that contingent on the manganese processing in the United States? Could it be anywhere in the world?*

**Judy:** Yes. To be honest with you the logistics of taking the manganese from the US overseas to process means it probably won't be used in the North American market. There is a strategic interest for the US. The

preference is North America closer to manufacturing, pre cathode and cathode material.

**2.3 Melanie:** Here is the draft of the new Panel website. There's a landing page that talks about the history, the Panel Charter, and then it lists the panel members. We will use the affiliation column on the roster for a description under your photo. There will be a simple calendar that shows the rotation between the Nogales and Patagonia locations and then the resources area has agendas and minutes which will be a lot easier for the public to find. There is a "Contact Us" section that can be turned on and off. This could be used if we're soliciting public input for something, for example the CPBA.




**Fritz:** *Who on the panel is looking over all that stuff?*

**Melanie:** Linda looked over it briefly with me.

**Marcelino:** *Who's going to be responsible to make sure that the information we want gets on the website.*

**Melanie:** South32 is the financial arm of this. We are reimbursing a website developer, a local person in Rio Rico.

**Catherine:** Currently the content is initiated primarily by Joanne and me, such as the agenda and minutes, or by presentations (PowerPoints or reports). When the minutes are approved, we will get them uploaded to the website. This will include the Q&A document and all past minutes and agendas.

**Melanie:** Does everyone agree we can make it live before the next meeting? [Note: There was agreement]

**2.4. Dewatering**

**Ben**: *What about dewatering? It's on the agenda. We haven't heard about the dewatering options yet.*

**Melanie**: It is noted on the agenda that if there is no new information there will be no report. Ty Ferre is joining us on Zoom at one o'clock for an open hour of questions and answers.

**Ben:** *But the dewatering update would be from South32 and all we keep hearing from Tomas is it's under consideration, which isn't very transparent, doesn't really give us anything to hang our hats on.*

**Melanie**: So, the discharge options will be something that we can discuss at a high level at the September meeting. Is that right, Tomas?

**Tomas:** Yes, a lot of this has to do with the Mine Plan of Operation so this means that looking at discharge options will be included in a later discussion associated with recharge opportunities and discharge to Harshaw Creek once the Forest Service has evaluated the Plan.

**3. Community/Group Updates Panel – Panel Members:**

**3.1 PARA Update – Carolyn**: This is going to be fast. I ran away from home to a family wedding in the Upper Peninsula of Michigan danced like I was 21, blew my knee out and so therefore I don't have your update reports. I will get them done and forward them to you next week. I will say there's still a lot of legal action going on. On the Federal matter there are documents due on Friday. And there's quite a bit of weird stuff going on with the AZPDES documents back and forth. I disagree with Melanie's statement that the appeals board has made it clear that they can discharge under the existing permit because that is currently one of the things being challenged.

**3.2. Friends of Santa Cruz County (FOSCAR) – Ben:** FOSCAR activities are one thing, but the community activities are another. It's still a hornet's nest that's been stirred by Jackson, I guess. And the community is pretty much opposed to the manganese anywhere here. There are several groups out there forming. Some are incorporated. They're not all on the same agenda. It's chaotic if I may use that word. The groups and individuals are opposing the manganese, not the IROC, but the manganese processing anywhere in our airshed, our watershed.

**Melanie:** *That's why we're encouraging people to come to the Open House to get more information because there is a lot of misinformation out there.*

4. **Standing Topics:**

**4.1 Community Protection and Benefits Agreement (CPBA) Working Group – Damian**: We had our meeting on August 3rd, and it was a very productive meeting. We have consensus amongst the Working Group to recommend that the signatories call the agreement: The “Community Protection and Benefits Agreement.” It is a strong name and fully captures all the all the components of what we're thinking.

Chris and Ranay introduced a concept they are calling the “Integrated Council.” This would be the central entity that would provide oversight for monitoring, reporting and transparency, and a process for feedback. There was also a good healthy discussion about what level we're working at. The Working Group will provide detailed recommendations recognizing this as a tool to help the signatories do due diligence and seek scientific advice to finalize the agreement.

**Marcelino:** *I would like to say thank you for the good work that you have done so far. I didn't think it was going to be possible to get this done.*

**4.2 Q & A Document – Fritz:** We've submitted a bunch of questions on water and other topics, and they are being entered into the document by Catherine and Joanne. I'll review it when they get that part done. I want to be sure you are clear on the process for getting a question into the Q&A document. If you have questions, put them in writing and email them to Catherine and Joanne. It will then be put into the document and sent to South32 for response. You ask a lot of questions during meetings, but do you want them in the Q&A? If you do, then send an email so we have a record.

Questions and Discussion:

**Damian:** *Fritz, thank you for the time you're putting into this.*

**Linda:** *Melanie, the process is that the answers you provide must go to legal?*

**Melanie:** Here’s how it works. I got a controlled updated version from Catherine of the questions. We internally farm the questions out to the various technical experts to get updates, which includes a review of the previous questions which may have had a note that said they would be updated later. Then I compile the answers and then we review it internally. It is a public document because it's discussed in this forum which is transparent and available to the public so it will undergo legal review. As the number of questions increases that will take more and more time. So, for example, after the MPO becomes public, there might be a lot of updates to that document and that update might take more time for legal review.

**Linda:** *Okay, the first time took four months.*

**Melanie:** Well, things happen, family emergencies, other things happen, but we do try to move it along for a timely update.

5. **Check in with Dr. Ferre via Zoom:** As a reminder, in my capacity as a hydrologic intermediary, which is sort of a strange role and something that we're trying out, has real promise. But it works if I can keep the good faith on both sides. My goal is to make sure that the process is going forward in a way that everybody's getting what they need and for you guys to be speaking to each other rather than past each other.

This allows me to have a look at models or model reports before they're made public with the understanding that that I will share my review and impressions with you. I will also advocate on your behalf for things that that I think you're going to want to know or that you're going to want to have represented in certain ways in the model before the model or the report is released publicly. As I present and answer questions, I'm going to be careful to make sure that I honor that role.

I've had a chance to look at the reports. One I would describe is a structural model report, and that's the one that we discussed the figures in the last meeting I attended. I found that useful to be able to take feedback from you and to be able to communicate with the consultants how their figures might need to be presented differently to you as an audience, rather than to a typical technical client that they may have and that's 90% of their clients.

Then I had a second report, which was initially described as a model calibration report. I read it and I had questions about it that I presented on your behalf. One outcome is that we're now thinking more specifically what model calibration is and what it isn't. When we build, or anyone builds, a groundwater model it doesn't matter what platform or how detailed or non-detailed that might be. The model is a representation of the 3D groundwater flow system, which we call the domain, and then how the rest of the universe impacts that domain which we transmit through boundary conditions. So those would be things like how much recharging occurs and where does it occur and how much it occurs. How does the groundwater interact with surface

water? And then all these structures are tuned to the specifics of the site through hydraulic parameters. A typical hydraulic parameter that we might talk about would be hydraulic conductivity. That tells us for a given energy difference in the water over a certain distance, how much water would flow? And it would tell us things like, if you think of the whole basin, if you had something like managed aquifer recharge that's causing a lot of water to go in one place and cause a mound to rise. Well, we know just from the structure and the physics that there's going to be a mound, but the actual size of that mound and how it developed through time is tuned by changing the parameter values to fit observations.

**Fritz**: *You and I talked about there's going to be a mine model and then there was going to be a global model, and we needed to be certain that they talked and gave the same answer at the interface. Are they doing that?*

**Ty**: Not yet. I wouldn't say that that has been shown to my satisfaction yet. That is something that I've asked them to demonstrate. That's a good question and that is still to be resolved.

**Tomas**: To help clarify the purpose of the regional model is for the evaluation of the larger region of the area around the Patagonia mountains to set the Santa Cruz Valley, the San Rafael Valley, and elsewhere. The purpose of the smaller model which you're referencing is strictly for operations. This is not evaluating impacts to the community. But looking very specifically at mine specific interests associated with the mining operation and mining planning. The value for the community looking at the smaller scale model is minimal because it's a smaller region, it's relatively localized to the mine site and really is only looking at things primarily associated with the mining program. Whereas the regional model is looking at how those operations impact the broader regional picture of hydrogeology.

**Fritz**: *I get that. But you must be able to talk at that interface. If they don't come up with the same approximate answer, you have a burst between the local model and the global model.*

**Ty**: I would say that slightly different. It would be hard to imagine the regional model and local model agreeing on an interface per se because the way that stress would be put in a global model they wouldn't come up with that same distribution. But I do think it's reasonable to say that the pumping influence from the mine will be transmitted essentially through that boundary to the larger model. It's reasonable to say that as that local model is developed and more closely calibrated and matched to observations that won't be available for the regional model, I think it's a reasonable expectation that you would use the boundary of that local model. Essentially, it's about internal boundary condition for the larger. Would that be a reasonable expectation to us?

**Tomas:** My initial thought process is they are not. Their purposes are different and consequently there are significant differences between them from a hydrologic boundary condition. Looking at those regions around the sub regional model, the smaller model. I agree that they should agree but let me try to describe this in a little bit more detail. If you simplify a system that has two model layers, then you have a complex system that has 10 model layers, exactly how closely in alignment are those going to be? Because we're going to have 10 different pieces of information coming from one model and only two pieces of information coming from another model. And so, as a general statement, you would expect flows across those interfaces to be similar, but the exactness between there should not be expected because, again, we're dealing with slightly different refinements.

**Ty:** I think that's completely fair. What I was trying to say is we are trying to compare apples and oranges. But I think that this is a nice place for a compromise in which you know, the exact pumping rates and pumping schedules may be something that you may never be able to release. But the impact of that at the larger scale feels like something to me that we would be able to then import the understanding that you have from your local operations into that larger model. Even if there are some discrepancies where you have to do some upscaling or things like that. And I think I'd just like to have that as something that we at least keep on the table for discussing how we're going to make sure that the original model is getting the best information it can from the local model.

**Tomas:** I think we can discuss that further.

**Ruth Ann:** *My question is: Can the model show what impact a continuing drought and a 20-to-30-year dewatering have on the aquifers in a region?*

**Ty:** That's a good segue to what I had started with was a general concept of what calibration means. And, and the difficulty that we have is we usually have sparse data, and the result of that is that we can always find multiple different sets of parameter values that can fit the data. The reason that pushed for the model report to be thought of as an initial model report is, I think that what they have demonstrated to my satisfaction is they have considered the domain and the structures. I think most of the boundary conditions

are well considered. But what they've done so far is demonstrate that there is a set of reasonable parameter values that will make the model match the data reasonably well. This means the model isn't so far out that you must do crazy things with the parameters to make it match your observations.

At the next stage they've committed to doing prediction uncertainty modeling we'll be looking at specific predictions of interest for the community already put together and thinking about how does parameter uncertainty affect the uncertainty of those predictions? It's a more involved calibration process and sensitivity analysis type process, and it would include things like, are there uncertainties in some of the hydraulic properties, are there uncertainties in the proposed pumping rate? What if that's 10%,15% higher than it is lower than it is? I'm just throwing things out. And it may also reasonably include some ranges of future predicted climatic drivers, like climate change.

As a groundwater person, when we think about drought or any kind of climate change, we think of it as translated through this groundwater system. So, we're not thinking necessarily about how the temperature might be proposed to increase or whether the weather or rainfall will be intense or frequent. We translate all of that into what impacts the ET (evapotranspiration), and what if it impacts the recharge to a certain degree? And so that makes it a little bit easier for us to do some of the type of modeling that you're looking at as far as the sensitivity analysis. What if recharging this area were to decrease 10-20-50%? Does that help to answer your question?

**Ruth Ann**: All these parameters and all these uncertainties figure into how it is going to affect the aquifer and the groundwater. The first time you came to us when we were meeting over in Katy Hall, you said something I remember so distinctly. You said that 90% of this is inaccurate. We're going by 90% uncertainty. It's modeling the future.

**Ty:** It is. It's a subtle and difficult point. We as professionals stumble over this all the time. If you take any one model and say it's going to represent the future, you're almost certainly going to be wrong. And so, the way that we try to address this is build this suite of models or suite of parameter values that capture our uncertainty, so that this cloud of predictions has a much better chance of capturing what will happen. That becomes difficult for decision makers because you're now faced with not a crystal ball, but 1000 crystal balls and say something slightly different. How do you decide? One of the things that can come out of this that's positive is we could run this suite of models of this sensitivity analysis on these models and even if we take the direst predictions for climate change, and the highest pumping rates, and all of them the most inauspicious parameter values that will still calibrate, that this aquifer won't go dry. We haven't done that. And at that point, we have a much stronger statement than we do with any single model. We're really trying to think about how things could go wrong. And we're trying to put those in the model faithfully. And we're essentially saying that to the best of our knowledge with science, it's not that we don't think it's going to go wrong. It's we don't see how it would go wrong when given those conditions. So that's sort of where that subtlety comes into us.

**Tomas:** Maybe just to address your question on this slightly simpler level. Yes, climate change can be addressed in the model and will be.

**Ty:** This has not been done yet. But that is part of what's committed to for the next phase.

**Marcelino:** *My concern is that the wells are going to be pumping 24 hours a day. And if there's a flood in Patagonia, the wells are not going to be shut down. They're going to continue to pump. I'm concerned about monitoring the quality of water and of the dewatering process as it's flowing down into Patagonia and how that is going to have or is it going to have an adverse impact on the quality of life for the residents of Patagonia? Previously you told me that the model could answer it, but I still don't have an answer. To me that's a very critical question that I need to get answered before something goes wrong. I know part of my question is in litigation, but what can you tell me?*

**Ty:** You're right, the model will not definitively answer that question. That is a question that is best answered and potentially only answered by monitoring. What we can do is use the model to identify places that are smart to place monitoring. If you look for a traffic jam in the middle of a farmer's field, you're not going to find one. We want to be smart about where we place that monitoring and how we interpret it. But the question of whether there is a change or an exceedance in the quality of water coming out of the mine being pumped into the surface water is only answerable by having an agreed upon monitoring scheme. Tomas, this is in place, right?

**Tomas:** Yes. The water quality will be monitored continuously for all the discharges that will be coming from the water treatment plant at the site. One of the things that Melanie is going to find out is a question that was asked earlier about the frequency of monitoring at the site.

**Carolyn:** *I must step in here and disagree with that. The monitoring that you first mentioned is only the monitoring ordered under the APP permit at the point of discharge. What I heard Dr. Ty speaking about was monitoring downstream in several locations and PARA asked for three specific monitoring locations. ADEQ went with something conceptual. I think we are talking about something different, Tomas. And with respect to the voluntary program that you have none of us have any idea who are the well owners participating and you are not allowed to release any of that information. So as far as I'm concerned that information is useless to the public.*

**Tomas:** I think that there is dispute on the sufficiency of the monitoring that's in place. If there are locations or wells that you have possession of that you want monitored that are not part of our monitoring program, we are more than happy to consider and develop an agreement with you for wells that you own so that we can monitor those for you. However, as you suggest, Carolyn, that information is private and that belongs to the well owner. They have ultimate authority over the data which is collected.

**Carolyn:** *They do, Tomas, but I'm not talking private well monitoring or any well monitoring. We are talking about monitoring the aquifer along the point of discharge and that's completely different.*

**Ty:** I think this is a valid and valuable conversation to have. And it's a separate conversation from modeling and I'm happy to be involved. If it were me and I wanted to make sure that I knew about the potential for an episodic release of contaminants that may eventually have an impact on me, I would want to monitor the stream water. The first place is monitoring the discharge with the idea that if there is no release from the discharge that exceeds any level of concern that it's not going to concentrate as it goes down the stream. The second would be if there is a release, choosing at least one place, say between the mine and the town, that you could do episodic monitoring, so that you can say how that release transporting along the stream? I'm not going to come up with the decision for you, but I'm happy to be part of that conversation.

**Fritz:** *I have three questions. Does the Model show groundwater mounding in and around Patagonia. That's part one. Two, does it show the short circuiting of the discharge within the depression column? Because you're discharged, you're right there at the property and you've got to be in the discharge cone. Does the model pick up that short circuit?*

**Ty:** I'm not sure I'm following what you mean by this short-circuiting. The discharge cone being around the stream and right where you would put the water in the stream and then it would go into the aquifer?

**Fritz:** *Yeah, so the discharge cone may be two miles wide, but you're discharging within the center of it. If you're discharging right, there in the property is the model taking that into consideration?*

**Ty:** The model as constructed would account for mounding that would occur due to infiltration in a streambed. That is one of the questions that I have, and that is, how is that being handled? And so, I don't have the answer for you yet, but I can say that looking at the model and the way that that model is constructed, it would represent that kind of mounding. Now we can talk a little bit about short circuiting. I'm not sure honestly that I would, that I would necessarily think about water as being short circuited because you do have a mound. So, you have an increase in energy in that location.

**Fritz:** *You're on the wrong track. So mounding is down in Patagonia. Yeah, short circuiting is at the mine site. As they're pumping those dewatering wells, they're creating a depression cone. Within that cone, they're also discharging 4,000 gallons a minute. So, does the model consider any possibility of short circuiting back through the stream back to the dewatering pumps?*

**Ty:** That's a good question. In my mind, apart from Patagonia's interests, that would only be a benefit in that that water would be recaptured by the mine by the pumps. So, when I was thinking of short circuiting, I was thinking you might take it out water was somehow getting off site faster than you expect. But this is more recirculating within the cone.

**Ben:** *Let me ask you another way. In your last presentation you showed Newfield's, the cone of depression, and we know it's not conical, but within that, we wonder if there's any connection of the model between surface and groundwater because of what Ty is saying. The discharge point is within that cone of depression, yet we didn't see anything that would show that you are adding water at basically the same location so is it even talking surface to groundwater interactions? We don't see that in that great big cone of depression. We don't see where there's an additional recharge from the discharging point.*

**Ty:** My take on this would be that that when you put water in surface water, that's a very conductive route. So that water when it hits the channel, will leave the system quickly and only some fraction of that will recharge, will infiltrate back in. So even if I have a cone of depression, if I release water on the surface within that cone of depression, it can still leave and not be captured by surface water. And that wouldn't show up in your mass balance.

**Ben:** *It would show up in mass balance down in Patagonia.*

**Ty:** That's why I'm struggling a bit. If we took it to the extreme and said that the recharge was occurring within the cone of depression, so all of it would be captured, then you would essentially have no impact on it. That's your one extreme with no impact. And if there's no recirculation, it would be the impact of releasing all that water going downstream. That's your worst-case scenario. And the model will, again with the caveat that I want some clarification on this, should account for the increased infiltration into the streambed, associated with increased head in the stream so that you will potentially recapture some of that water. My gut tells me that that's not going to have a major impact on what you're going to see in Patagonia or even at the mine.

**Ben:** *Where will the water that has been discharged go? Where will that go if it's not going to cause a major mound in Patagonia?*

**Ty:** It's not that you're not going to see the impact on Patagonia. It's that recirculation is not going to be the main thing to worry about in terms of the impacts on Patagonia. So, in other words, if you just ignored that and thought of all the water being released to the stream, then that's telling you about the worst case for what's going to happen in Patagonia would be captured by the model. And it would only be decreased by this recirculation that you're talking about. My thought in terms of representing what matters to you guys is first, we don't want to assume that the streambed is so conductive that no matter how much water you put in the streambed, you'll never have flooding in Patagonia. That's one that we can make, but it's not reasonable and it doesn't serve your questions. We also may not want to assume that there's no infiltration into the streambed if you're interested in groundwater mapping at Patagonia. So, it's sort of in between these two, and that's what we're trying to capture with the model is how much of that water that's put in the stream will infiltrate, and where will it infiltrate.

**Ben:** *Okay. The other question is in one of your other exhibits that you presented last time, was a cross sectional profile of that cone. It showed early, mid-term, and late contour lines of drawdown. Those lines were so faint, we could hardly see them. It did show some extending into San Rafael Valley.*

**Ty:** What you should take from that is what we expect to have happen as you continue to pump water out, you're going to continue to decrease the water table so the cone will increase in volume with time. That's fully expected. As someone said, that cone won't be a perfect circle, or perfect circular cone because of heterogeneity, and the specifics of how far that will extend in time. That's the kind of thing that you want to do in this next phase where you're doing predictive uncertainty, because any contour that you got from any one model is almost certain to be wrong, unless you're extremely lucky. But if you if we do this sensitivity analysis, and let's say for example, we show that everything that we do that lends itself to calibration shows dewatering in San Rafael at any time that we model that.

**Ben:** *What were the timeframes for early, mid, and late and years, approximately?*

**Ty:** Honestly, I don't recall, and we can look we can look back at data that should have been labeled. And if not, if send me a quick email. I will find out what those times were. But in the predictive modeling part, this next phase, then we can expect that those will be pegged to specific times. I don't know if there's a regulatory limit on what those times mean, or if you guys want to have input on what do you think is a long time then have that input and we can include that consideration.

**Ben:** *We'd like to have an approximation of what's early, mid, and late.*

**Ty:** Some of that depends on the projected lifetime of the mine and the dewatering for the mine. And presumably there is early, mid, late of the operation of the mine and then early, mid, and late post closure. So, I think all these things are predictions of interest.

**Fritz:** *Will the model show general areas where public wells will be dewatered?*

**Ty:** What the models will show is predicted changes in water level at each location over time. That's a slightly softer way of saying yes to your question. If you know where your well is, first, you must realize that a regional scale model is not modeling exactly your well. Your well is within a cell. There's some uncertainty as to is the water level 20 centimeters higher, which means it's still in your screen interval or 20 centimeters lower, which means it isn't. That's one caveat. The other caveat is again, what we'll end up with is a sequence of models that will say the most likely outcome is that this would be the change at this location, but we see that there is reason to defend a prediction that ranges all the way from this to this. I'm being a little bit soft, because whether somebody's well goes dry depends on the screen interval. It depends on how deep it's completed. It depends on lots of specific things.

**Melanie:** That's exactly why we have the community monitoring program so that we have baseline information for not just water level, but also water quality, so that we can know if something is changing.

**Ben***: This question is twofold because of something you keep saying "different models." Do you mean different models run with the Newfield's model? That's part of the question, but also, we talked about the potential for a groundwater mound causing increased flooding risks from Patagonia, not somebody's well, specifically, but they're in Patagonia is what we're concerned about. The other half of this is the longer-term dewatering. Will the model be able to show how much of the area and Patagonia is dewatered? And to what level so that we can figure out if wells in that area would be lowered or dried out?*

**Ty:** I'm going to answer your second one first with the caveats that I gave before about being able to say a specific well will or won't go dry. That is beyond how you use the model to determine that to some degree, but it is reasonable to expect that a groundwater model or a suite of models will make predictions about future changes in water level throughout the domain. So, absolutely, that that is that is rock solid that should be there. To your first question of what we mean by model, if you ever want to get groundwater modelists distracted, just ask them what you mean by "modeling" and let them go. When I use the term model, I simply mean a representation of the system. In this case, practically what we're looking at is one model platform which is Newfield's model with a range of parameter values, including boundary conditions. A model purist would say that's really one model with different values. Others will say that's a multi-model. Others will say all the multi-model is one model. That's what I mean.

**Ben:** *One platform MODFLOW with different scenarios by varied parameters.*

**Ty:** Yes, and what I'm trying to do, because I'm sensitive to things that you've said so far, about the comparison of different platforms. One thing I've been very clear about is that there is no one accepted platform. There's no one best platform. All these models can be used to model similar situations. But it's very important how the model is implemented, to make sure that it's modeling the physics that matters. That's why I have a specific question for them about how they're dealing with a boundary condition. So that I can feel confident that MODFLOW is being used in a way that is accepted for modeling systems.

**Carolyn:** *Will this modeling be able to tell us the dewatering is here, and the natural recharge is not happening as it should? I don't want to dry them out. At what point are we going to be able to look at these models and say, hey, too bad you got to stop mining because you're drying them out now?*

**Ty:** And, again, this gets to what a model can and can't do. So as far as whether the recharge is occurring that's something that we impose on the model. It's not something that the model can tell us. That's why in the sensitivity analysis, the prediction uncertainty phase, we must run that model with different levels of recharge. We might say, if recharge were just suddenly reduced by 50% or whatever number we agree to look at, then this would be the impact of pumping. Does that distinction make sense? A model takes the boundary conditions and then propagates them through the system and says, what's the result? So that model won't tell us what the recharge is but for different levels of recharge the point of doing this multi-modal analysis is to say this is the range of expected outcomes that we have for the proposed pumping with the uncertainty and for instance, recharge that we have. Does that answer your question?

**Carolyn***: Well, it does to the extent that this is an important part of the Community Protection and Benefits Agreement.*

**Ty:** All of this has been building up to where we are now making sure that you guys have really thought about the questions and what are the things that matter to you. Going to the next stage where you say, not only is it a reasonable looking model, but it can be calibrated with reasonable parameter values, which is another fence it has crossed to say that it's on the way to being an acceptable platform for the model. And now we still must go through that phase where we do this sensitivity analysis, multimodal analysis, to say what do we know and what we don't know.

**Ben:** *Regarding boundary conditions, because that's important especially when you're talking about recharge, which is an input to the model. Are those constant or are they variable?*

**Ty:** They are a mix. If you have something where you have a structural reason to think that there is no flow, so say, a closed basin, you will have that. If you have something that depends on the stage in the river, then it would be variable. A weak point of models is often you would love to have good physically based boundary conditions around the entire model. And sometimes you just don't, and that aquifer is connected to another aquifer. But that sort of throughflow or underflow or interflow can be a weakness. I don't recall that that is a major part of this model. And I am 90% sure that any of those boundaries are far from where they would have an impact. The classic example is you wouldn't want to represent a stream as a constant head boundary and then say, look, no matter what we do, it doesn't affect the head in the stream because you've just told them that. But if the boundary is very far away, the model has a chance to dissipate that influx.

**Ben:** *Up* at *the site you're on a mountain in fractured rock. What are the boundary conditions affecting that*

*once it's dewatered? Is that head going to change or is it going to be kept constant?*

**Ty:** If you're thinking about up in the mountains, then as a hydrologist, that's our dream. Because we have this physical boundary where water is going to flow to one side on one side of mountains and then the other on the other side of mountains. From a groundwater perspective, there's no flow across that boundary. The nice thing about that kind of boundary condition is we don't have to specify the head value. We just specify that water can't flow across that boundary and then the head adjusts to whatever we drive the model with. In general, the models that I looked out for are where heads are defined because then you are telling the model the answer it will get and so you must be a little bit more careful of those in my opinion.

**Linda:** *To a practical usability question going forward when the models are developed and refined to a point that you/whomever are comfortable with predicting the future, and those parameters get woven into the CBPA, what happens a year from now, two years from now? Did the models run continually and is the output available so that people can go oh, the mountain is drying up – stop?*

**Ty:** It's my understanding that there's a commitment to update these models in the future and I'll get a written confirmation of this. The question is the frequency with which that happens, and that must be negotiated and decided. You don't necessarily need a model every year. These are groundwater systems. They don't tend to change that fast, especially far away from the stream. But you wouldn't want it to be every 100 years because then it's too late. Think of it this way: what we'll end up with is say 10 or 20, or some number of combinations of parameter values and boundary conditions that we say these all provide reasonable calibrations to the data that we have right now. And they make either the same predictions in some ways or different predictions. So that gives us our constellation of uncertainty in model predictions. The simplest way to use the data that comes in through time is to continually reassess how well each of those models is making that prediction. So essentially, what can happen is out of your 20 modeling, you might find that three or four of them started to fail over five years. So those models can no longer be considered as part of your constellation of models.

6. **Upcoming Meetings**
   - September: Nogales (Provisional Community College), 11:00 am to 12:00 pm – Ty will be in the featured speaker.
   - October: Patagonia, 12:00 pm to 2:00 pm
   - December: No meeting.
7. **Wrap-Up – Final Comments - Catherine:** None. Meeting adjourned at 2:00 pm.

2 Attachments:

1 – Meeting Minutes Talley Sheet

2 – South32 Briefing Slides

3 – Working Group Meeting Summary

# SOUTH32 HERMOSA

Project Update
**August 2023**

# ONGOING PERMITTING & SITE ACTIVITIES

1. Flux Exploration Drilling Plan (no update)
   - Received decision memo and continuing to work on final plan
2. Small Tracts Act (no update)
   - USFS Review
3. AZPDES Permit
   - WTP2 commissioning and performance testing in August, followed by discharge
   - Current permit remains in effect & confirmed by Water Quality Appeals Board
4. APP Permit (no update)
   - Arizona State Superior Court denied PARA's motion to stay the WQAB decision during pendency of appeal
5. Site Exploration –
   - Continuing shaft sinking activities
6. Off Site Projects
   - CCC Construction
     > Current activity is grading phase 1
     > Target project completion date is June 2024

# Federal Permitting Process

## The National Environmental Policy Act (NEPA)

The National Environmental Policy Act (NEPA), signed into law in 1970, imposes **a requirement** for **federal agencies** to **prepare** a report describing the environmental consequences of federal agency proposals or actions *(e.g.*, issuing a permit). An **Environmental Assessment** (EA) is prepared for federal actions with **no significant impacts** on the human environment while an **Environmental Impact Statement** (EIS) is prepared for federal actions that have (or are expected to have) **significant environmental impacts.**


*Less intense*

If the federal agency completes an EA that finds course of conduct should have no significant impact on the environment, then it may issue approval.

Under either scenario, NEPA requires lead federal agency consultation with Native American tribes and with other relevant federal and state agencies regarding issues such as potential impacts to endangered species or historic properties.

*More intense*

If course of conduct may have significant impacts on the environment, then approval must await EIS.

- Activities that will likely cause Significant Surface Resource Disturbance (SSRD) on National Forest System Lands require filing of a Plan of Operations and attendant NEPA compliance.
- "Significance" means "based on past experience, direct evidence or sound scientific projection, the [District Ranger] reasonably expects that the proposed operations would result in impacts which more probably than not need to be avoided or ameliorated by means such as reclamation, bonding, timing restrictions, or other measures to minimize adverse environmental impacts on NFS resource."

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5356906.pdf

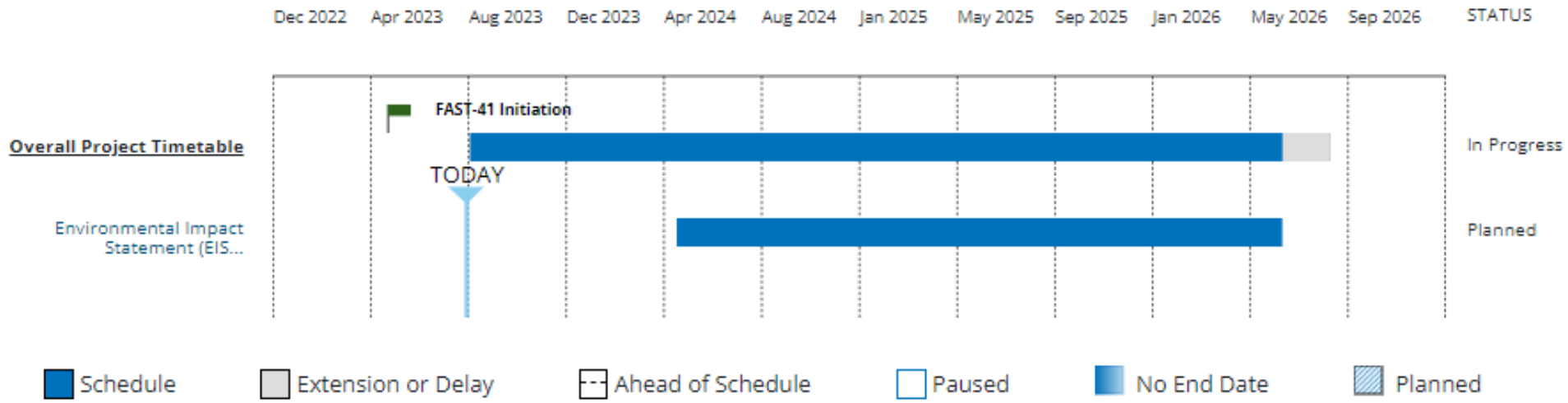
# FAST-41: PERMITTING COUNCIL AND DASHBOARD

- South32 Hermosa Critical Minerals Project | Permitting Dashboard (performance.gov)
- Updated July 5, 2023 with permitting timetable

## Permitting Timetable

The permitting timetable below displays data as reported by agencies. Dates for Environmental Review and Permitting processes (Actions) that are in 'Paused' or 'Planned' status are subject to change and are not indicative of a project's final schedule.

- For information about extensions, select an Action from the timetable below and select 'View Action Details' at the bottom of the page.




## Action Information

For additional information, please select an Action from the Permitting Timetable above.

# RIO RICO OPEN HOUSE EVENT

**Tomorrow Aug. 17 5pm to 7pm at Rio Rico High School**

- **Pat to make brief comments at 5:30pm**

As discussed last meeting:

- South32 never planned on mining in Rio Rico – we are completing location studies for two off-site facilities
  - These facilities do not have to be in Santa Cruz County
- Remote Operations Center – approximately 5 acre office building, site to be determined
- Manganese facility – approximately 150 to 250 acres, site to be determined
- South32 is committed to Santa Cruz County
  - We are committed to working  with the community and incorporate feedback into the planning and design of the Hermosa project
  - Exposure risk is low. We are committed to protecting community health
    - Community Health Baseline Assessment
    - Manganese research with University of Arizona
    - Ongoing monitoring (Community Protection & Benefit Agreement)
  - We want to collaboratively grow the local economy and grow a local workforce

# PANEL WEBSITE

Home - **Santa Cruz County Advisory Panel on the South32 Hermosa Project**

- Our History - Who We Are
- Our Charter
- Our Panel Members

Calendar

Contact Us

Resources – agendas & minutes


*Footnote*


SOUTH32

# GNA Working Group (WG) Report

**Santa Cruz County Advisory Panel on the Hermosa Project**

**October 12, 2023, 11:00 am – 12:00 pm AZ Time via Zoom**

**Present:**

**Acorn International**
- Ranay Guifarro
- Dr. Chris Anderson
- Dean Slocum

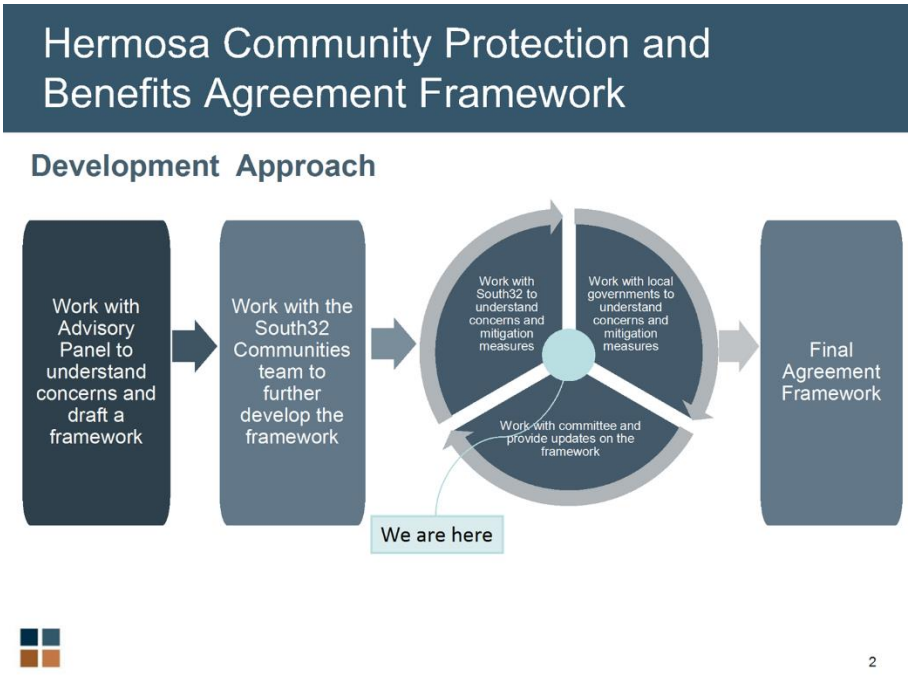
**Working Group**
- Gerry Isaac
- Ben Lomeli
- Caroline Shafer
- Linda Shore
- Andrea Wood

**Interfuse Associates**
- Catherine Tornbom

**Not Present:**
- Joanne Lamb
- Damian Rawoot

**Meeting Agenda:** The working group Zoom meeting started at 11:01 am. with Catherine turning the meeting over to Ranay from Acorn International began the meeting discussing the items that are listed in the slide shown on the right.

**Discussion:**

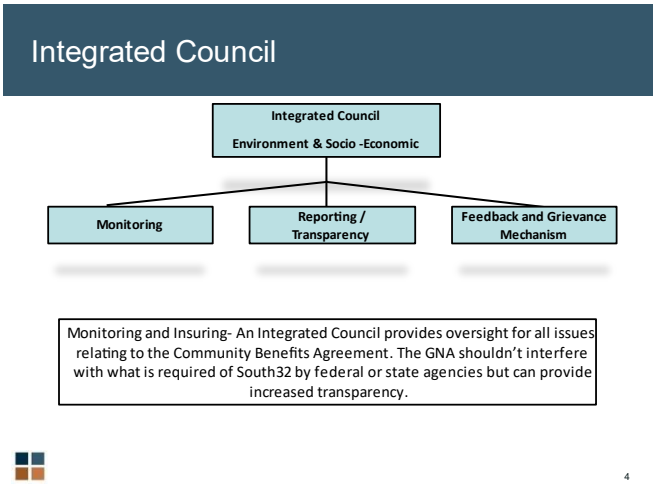



Adding the word "Benefits" to the agreement was brought up. The agreement is all about protecting the community from the risks and potential impacts from the mining operation, so it seems logical to add it to the title.

Another poll will be sent out with two options for the members to vote on:

**Draft Outline Discussion:**

The slide on the right shows the suggestion that Acorn International has for an integrated council that would be environmental and social-economic. The individuals on these councils could have lots of background and knowledge and work in different areas, but ultimately what they're looking at as monitoring, reporting, transparency, feedback, and a grievance mechanism. The council would just be ensuring that what was agreed on in the Community Benefits and Protection Agreement said they would do that South32 was in fact doing that. An example of what this integrated council would do is they would, if there is a concern with maybe the results from the water treatment that they would be able to oversee that there would be a third party, ensuring that those results are true. They would be able to say that: "Yes, they are following South32 as following what was agreed upon in the agreement.



# Good Neighbor- Idea

*The project will be developed in a manner that preserves the quality and quantity of water in the County*

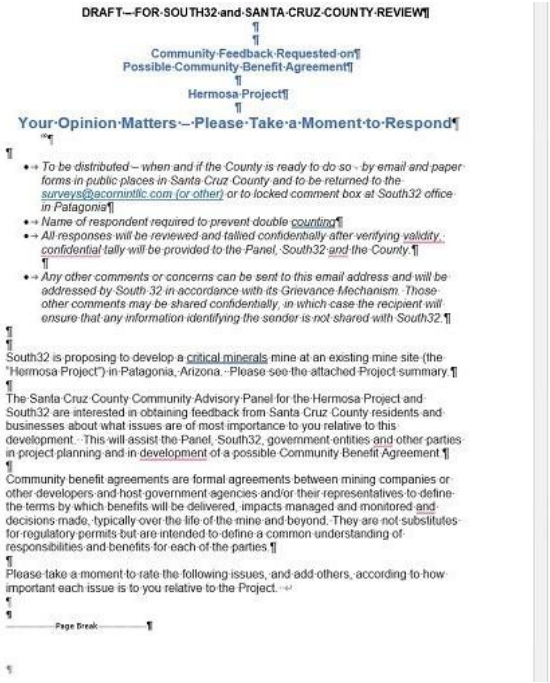
- *South32 will engage at its expense an expert to carry out an independent water quality and quantity monitoring program - the scope of this program will be determined by the agreement parties with public input, the monitoring activities will be open to public observation/participation at the discretion of the independent expert and the results will be shared publicly.*
- *The independent expert will, at its discretion, receive and attempt to answer questions of the public, and the Q&A will be shared publicly*
- *Exceedances of regulatory water quality standards will be remedied by South32 in conformance with regulatory authorities, and the results of the remedy will be reported publicly*
- *All other disputes will be resolved in accordance with the South32 grievance/feedback mechanism*

5

**Discussion:**

A draft agreement outline was put together by working group member Gerry Isaac. The panel liked the draft outline and felt that it was well balanced. There is a concern that there are no specific metrics which are needed to trigger an action.

Acorn International developed a draft poll for community input.



DRAFT—FOR SOUTH32 and SANTA CRUZ COUNTY REVIEW

Community Feedback Requested on
Possible Community Benefit Agreement
Hermosa Project

Your Opinion Matters – Please Take a Moment to Respond

- *To be distributed – when and if the County is ready to do so - by email and paper forms in public places in Santa Cruz County and to be returned to the surveys@acorntitle.com (or other) or to locked comment box at South32 office in Patagonia*
- *Name of respondent required to prevent double counting*
- *All responses will be reviewed and tallied confidentially after verifying validity - confidential tally will be provided to the Panel, South32 and the County.*
- *Any other comments or concerns can be sent to this email address and will be addressed by South 32 in accordance with its Grievance Mechanism. Those other comments may be shared confidentially, in which case the recipient will ensure that any information identifying the sender is not shared with South32.*

South32 is proposing to develop a critical minerals mine at an existing mine site (the "Hermosa Project") in Patagonia, Arizona. Please see the attached Project summary.

The Santa Cruz County Community Advisory Panel for the Hermosa Project and South32 are interested in obtaining feedback from Santa Cruz County residents and businesses about what issues are of most importance to you relative to this development. This will assist the Panel, South32, government entities and other parties in project planning and in development of a possible Community Benefit Agreement.

Community benefit agreements are formal agreements between mining companies or other developers and host government agencies and/or their representatives to define the terms by which benefits will be delivered, impacts managed and monitored and decisions made, typically over the life of the mine and beyond. They are not substitutes for regulatory permits but are intended to define a common understanding of responsibilities and benefits for each of the parties.

Please take a moment to rate the following issues, and add others, according to how important each issue is to you relative to the Project.

Page Break

Potential Impacts (based on stakeholder feedback from South 32's 2022 Social Impact and Opportunity Assessment)

Table 1 – Ranking of Issue Level of Important to Include in the Community Benefits Agreement (CBA)

| Issue of Importance to include in Community Benefit Agreement | Level of Importance to you for inclusion in a CBA | | | | |
|---|---|---|---|---|---|
| | Low | | Medi | | Hight |
| Community - Company relationships | | | | | |
| Water | | | | | |
| Community Development/Jobs/Economic Benefits | | | | | |
| Traffics | | | | | |
| Environmental and Social Nuisance | | | | | |
| Local Business Opportunities | | | | | |
| Education | | | | | |
| Sense of Place and Community | | | | | |
| Border Concerns | | | | | |
| Recreation and Ecotourism | | | | | |
| Demographic, Social Change | | | | | |
| Local Infrastructure | | | | | |
| Biodiversity | | | | | |
| Tribal Engagement and Cultural Heritage | | | | | |
| Government Relations | | | | | |
| Health & Wellness | | | | | |
| Blockages (Opposition vs Benefits) to Mining | | | | | |
| Influx / Immigration | | | | | |
| Arts Culture & History | | | | | |
| Impact on Community Resources | | | | | |
| Economic Impacts | | | | | |
| Closure and Rehabilitation (added) | | | | | |
| Other: | | | | | |

Section Break (Next Page)

**Action Items:**

| *Date* | *Description* | *Who* |
|---|---|---|
| **ASAP** | Poll to WG with the two suggested names: CBA and CPBA | Catherine |
| **August 16** | Report to Panel | Damian |
| **Completed** | Share initial list of topics, goals, and objectives for an agreement | Gerry |
| **August 11** | Prepare and Distribute WG summary (this document) | Catherine<br>Joanne |
| **Completed** | Working Group Dropbox Link to Acorn International | Catherine |
| **ASAP** | Distribute copies of sample GNAs | Acorn International |

## Next meeting:

September 7 at 11:00 am.to noon. Meetings are generally for one hour. All are welcome to attend.

Link: https://tnc.zoom.us/j/8712196245?pwd=bTBousingieFp0M3h3UnFBaTl2NDd6ZnNnZz09

MEETING MINUTES TALLY SHEET

*Minutes Dated: August 20, 2023*

| Panel Member | Email | Yes | No | Voted | Didn't Vote | Edits |
|---|---|---|---|---|---|---|
| Olivia Ainza-Kramer | president@thenogaleschamber.org | | | | X | Did not attend meeting |
| Liz Collier | elizadcollier@gmail.com | X | | X | | |
| Maureen De La Ossa | maureendelaossa@gmail.com | X | | X | | No edits |
| John Fanning | jfanning@scv35.org | X | | X | | No edits |
| Gerry Isaac | gerry@haciendapatagonia.com | X | | X | | No edits |
| Ruth Ann LeFebvre | ralefebvreart@gmail.com | X | | X | | No edits |
| Ben Lomeli | lomeliben@ymail.com | X | | X | | No edits |
| Damian Rawoot | damian.rawoot@tnc.org | X | | X | | No edits |
| Fritz Sawyer | fpsawyer123@gmail.com9 | X | | X | | No edits |
| Carolyn Shafer | joyfullybecomingcarolyn@gmail.com | X | | X | | No edits |
| Linda Shore | lshorephx@gmail.com | X | | X | | No edits |
| Memo Valencia | gvalencia@evalencia.com | X | | X | | No edits |
| Marcelino Varona | mvarona@q.com | X | | X | | No edits |
| Chris Young | cyoung@santacruzcountyaz.gov | X | | X | | No edits |
| Michael Young | myoung@patagonia.k12.az.us | X | | X | | No edits |
| Melane Lawson | Melanie.lawson@south32.net | X | | X | | Minor edits |
| **Total** | **16** | **15** | | **15** | **1** | |

*No*

*Source:* Panel email messages dated September 28 – October 5, 2023