

Incident Command Communications

February 8 to February 13, 2017

02-12-2017

Richard Tovar
1840 - Governor call in B. Croyle:
Attendees G. House:
J. McGough:
866 745 6240 Keeley?
Nancy?

1847 Standby.

Bill C. - ~ 2.5 hrs ago. Spillings over Aux spill
since yesterday. Made progress yesterday
SSLDW gabet spillway running continuous

Coming down from peak:

Drones photos

channel of erosion. Special attention to
assess. Erosion rate concerned a number
of people.

Had great technical people on staff

B. went to site to visually see.

went back to ICC. P Sheriff was there.
There was discussion before I got back.

the number the engineers stated we needed
to release was not a number we would do
↑ to 100,000 cfs.

Life feed - could see rate of erosion

Based on rate of erosion Sheriff received.

Sheriff decided to evacuate low lying
areas downstream.

At moment discharge is 100,000 cfs.

Flood control - is 150 - 160 K cfs.

concern is if erosion up to wier caused
the ^{any} spillway to fail, the amount of water
would be greater & exceed levee system

looking @ geology.

Sheriff continued to initiate evac orders.

ICS expanded. Sheriff implemented
Calls went out

Based on max flood event, ICS could be
compromised (we do not believe it at this time)

To be safe - we released.

City and EMS initiating evac orders
DWR

question IS Aux spillway in danger?

Last time we saw it,

Should stop flow within the hour

energy causing erosion should be dissipated
was lowered with ~~2~~
more spill

Still need inspection of Aux. Spill
DSDP + PERC reps.
we will work through.

Q: IS RISK GONE?

present condition: erosion on downstream
side of emergency spillway

flow should stop w/ in hr.

Don't have eyes.

Until we see it, assume it is a
threat

Lake \approx 901 + ft can't get more full.

Inflow \sim 30,000 outflow 100,000 +
can't confirm. Dark.

Pushing a lot more water down spillway
further degrade spillway - try not to

we have additional weather coming in.

Higher flows

Need gated spillway for the rest of the
spring runoff

Normally would have 0.5 m³ m³ of. we have
no buffer.

Need to maintain integrity of gated spill
and reinforce Aux. Spill

At this time - we may have enough reserve for this next storm.

Running forecast 4x/day.

Each time its higher or lower.

We have no available flood storage.

Ensign has caused sediment dam in

diversion pool. Issues for running plant.

- Compromised due to flooding, or
tower feeding grid

Been able to pump significant amounts of water south.

Need plant running - challenged to run water for ~~to~~

Q: Evacuations?

- Everyone is responding to evac. Notice.

Q: Tell everyone to come back.

Mark: Sheriff issued evac.

will remain in place. until DWR can assess situation.

Want happen until tomorrow morning

1,000's 10's of thousands are evacuating.
Hospitals ect.

Q: How much time did they have to pack bags?

Sheriff - make sure we had at least 2 hrs.

Had 2 hrs.

Had needed to leave ASAP

Q: Tonight, has danger subsided?

Q: Still not understanding. Further explain

there is still more that needs to be assessed.
inspections needed.

Need to consult with regulatory departments.

more immediate question.

Q: News was saying - could have a major flood.

- Risk of major flood is far less than two hrs ago.
- Still risk.

mark - Not ready to pull plug on evac order.

- Need inspections

- unsure of current state.

1912 - Ready to take off in 10 min M. Anderson
Sheriff's chopper → D. Walker maybe to observe?
← Airs recommend

we are using emergency / aux spill.

Not an issue w/ Onville Dam currently.

Large issue with Aux. Spill.

Evacs were focused to areas near Feather Riv.

Q: This will be a real problem - there is confusion

mark: People are moving to higher ground - prescribed.

~~Need to find out.~~

Need a count on how many issued evac.
orders.

Based on a failure of emergency spillway
whole dam?

1918 PERC on dam

Gaspar + Don Walker to go on Butte county Sheriff

Q: Nancy. Scope of geographic area of evac. order
Need clarified
Sheriff is making a decision on how many.
Shortly we will have eyes on issue.

Q: Need someone from DWR at SOC

B. ~~Send~~ C. Jones.
Contact

1920 Sheriff still @ press conf. can't come here.
Lawyers working on State of Emergency?

Lots of media

Director: Try to find out if camera on dam operates in dark. (Cathans)
to get eyes on it.

DSDD has great resources.

Part of education process - assess threat and next steps.

Task

G. Bordini to SOC
can cover multiple programs.

N: They are getting unclear stories 13,000+
people evacuated.
they will update numbers.

Red Cross is on scene.

National Guard contacted.

ICC in Oroville - relocating -

- working on healthcare facilities - evacuation status

Very complex. Let local law enforcement handle media for now?

Transferring prisoners

1928 - Sheriff has arrived. He's taking questions

~~Can't be here.~~

- Thank you for support
- Once decided to pull trigger.
Started w/ media
Grille pt south to head north

Reverse 911 focusing on areas around river
1st and most affected.

Have staff going door to door in ^{select} areas.

Search + Rescue brought in

Told that there is a lot of compacted traffic.

working w/ CIP to mitigate.

Been. Advised sutter county has been advised.

Avac @ Chico fairgrounds.

Q: How many utilizing?

It is filling up - don't have exact.

Can't make it happen fast enough

Great support from Assemblers, DPR, CIP,
~~etc~~ etc.

Yes there is confusion + chaos. Better than what it could be. That's the nature

Media seems satisfied w/ briefing at this time.
- Seem to be thankful we pulled "big red handle"

Trying to hit all media outlets.

It's an ugly, shitty mess and we are trying to make the best of it.

Q: - Is there anything more we could be doing?

Sheriff I will put in call. we can't be over resourced to help with PIO.

Q: JIC set up to coordinate. will continue with evac order until it can be expected.

Keep it going until you get clear from DWR.

Sheriff: Recognize that it has displaced a lot of people. But we need to keep them out for now.

- The message we put out

- Complex ~~is~~ situation - unprecedented, no models for it

Rapidly developing

Evacs in interest of public safety.

- Err on side of caution.

- Erosion up to face of Aux spill is not as rapid as we were feeling.

Flows 100,000

- Try to stabilize situation.

- We want to avoid a potentially catastrophic event.

N: Be clear it's not the dam - it's the spillway

Q: M: Framed? Spillway. Not dam.

It was important subject matter experts
can explain.

Q: Talked to other sheriffs

Yes Derfer

No other - name?

Evac notice

Have resources

Nothing flowing in is necessary

Everything stay in place until given All Clear
Card: JIC a consistent message

Thank you

→ 3044

Shirley June →

Back to Director

Redundant center at POC

N: Didn't know about Evac order until after
it hit the press.

Fairfax 2/19/10 @ 8: 1933

It's going down - recede

Rock is coming + helicopters.

END CALL
1945

Dir: we have been working hard to protect
plant. It's important for us. (DWR)

Risk to public more important.

Honey: Has water over aux spill stopped?

D: Last update was 2"

Less than 1 hr. should ~~be~~ not be spilling

Honey: 100,000 cts flood control spilling

Money: offering helicopters

Crayle: we will be going through this all Spring
Set up community / town hall meeting?

Look at what happened tonight.

Even if we get stable, what to expect for rest of season.

- Can't do rock tonight ~~as~~ choppers not in until tomorrow morning.

1952 Can we verify we have a staging area?
Cina to → Doug.

Truck coming from Bangor

Bags from Sutter Butte

Lines from Sac are MIT

PG+E wants an ICT call @ 2000

1954 Director:
Need to focus on spillway (gated)
Tower powerlines are still hot.
working on getting SEG connected.
Take a couple hours.

Do we have SEG hooked up?

Need to deenergize lines

How long to do that?

I thought it was getting worked on.

PG+E is worried.

2000 Snap Hyatt to SEG From Cina

Kill 2 breakers

Take 30 min to connect intake SEG

then they can isolate PG+E lines.

~45 min
to an hr
to complete

02-12-2017

2027 K. Lawson - Unified command w/ Sheriff
Cal Fire DWR + Sheriff

Croyle's Resource mgmt

DWR = technical side

need to be completely integrated

Anderson:

DSOD and our best eyes. inspect
at 1st light.

Lawson: Need 1 person

2030 - PG&E Conf Call: Croyle, Lawson, G. House,
Biermann,

Need follow up on redundant power (Side note from Croyle to G. House)

3 copters activated (w) engines in message
South region staffed & avail.

K. Lawson has briefing:

Focus on SitStat

Butte, Yuba & Sutter Summary.

Unified command w/ BCSO

Preplanning implemented already networking
currently evacuations mostly handled in
Butte unit.

Evacuees → Fairgrounds - need ^{make sure # has} support

02-12-2017

- BCS: 35,600 PEOPLE EVACUATED
 - ↳ DISCUSSION ON REPOPULATION
- FAILURE MODE EMERGENCY SPILLWAY
 - ↳ WATER GOING OVER, ERODING ROCK, → MONOLIFT
- CONTROL SPILLWAY HAS 1,100' OF INTEGRITY LEFT
- EMERGENCY SPILL IS "STABLE"
- TIM W. PUT FORCES NEAREST TO GATES
- STORM PROJECTIONS AND IMPACT TO RES. LEVEL

0220

~~0730~~ want to meet at 0730.

Pat to Director: People in field needs to get info back to Pat. - IC.

House informed Director that OPS is overwhelmed. Problem with Span & Control.

Whitlock:

if it wasn't for one geologist that came down and got Pat's attn; he is afraid that we wouldn't have even caught the problem.

Director: when he went up to the dam, had ~10 people (technical) telling him that it was a problem. He asked them if it was getting relayed to IC?

People have already been evacuated outside the max probable flood area. Need to make sure we ask the right request - Re: mapping of flows?

Here's threat → here's what it could look like
Provide the answer to the precise question. Don't provide something that isn't ~~that~~ exactly what is being asked for.

Lawson: Team below Div Dam is different. they are starting for information

Croyle: Need to do more than a drone in marginal light. Also need more.

Lawson: people as time goes on, pressure will rise to lift evac orders. Ppl will get upset.

May 1. 35,000 cfs and ↓
100,000 cfs control spill
0 Aux < 1000 hrs stopped
tailrace - 251.86

Scour - No addition concrete off controlled
spillway
minor erosion laterally.

Significant scour in 3 areas.

Inflow 150k into lake 1.5 days.

~~Take use to~~ should have enough
reserv.

Safety

- Be aware
- Be in contact

Team 3. Eval. Comm. Collab.
working w/ T. cob.

↳ Team A Assess roadways

Div X - pulled boats - evaluating flows
Evaluating debris load on
Div dam.

2 Type I rescue teams

Flights: 13 ships @ air attack base
heli platform. - any drone or team flights
need to go to him

There are some resources that don't have
cell phone radios.

Injuries - call 911.

DWR mgmt has difficulty rescinding control.

P. Whittlock wanted to increase flows, mgmt said to hold, Pat did (regrettably), and we lost time because of it.

Co House: They are sending resources to replace people that have way more knowledge. They are uncomfortable so Gina is uncomfortable giving it to them.

Lawson B. Crayle - his POW - Doug? shouldn't be on media anymore

- Need to steal ppl from other field divisions

Sheriff: ~~want~~ Brainstorming 3rd party. SME's
Need list of resources needed from other field divisions and Army Corp.

If I tell him that's what we need, pretty ~~don't~~ confident they will respond.

→ yesterday scary - 1,000's of ppl could have died.
Let's not let that happen again.

1-11

213 ordering make sure you use form

PLO: Intern. media attr: allows media access.
as long as they aren't hampering activities

Photos - send to them - find email in packet.

Finance no change in coding
report finance issues to finance

C. Hony - pulled red handle - this is what it
looks like.

~~G. House~~ C. Lawson: Unified command w/
BCSO + DWR

Comm. up + Down - Left + right.

Face challenges head on.

Public Safety and our Safety.

It was the right decision.

May have tweaks in command staff.

Keep info flow moving

day J. Pub - update Inspected steep logs

- every thing dry

- Batteries - re energized chargers.

Plant sump pumps running and holding strong

#2 running + keeping up } Core block
#1 failed.

All elevations dry. Plant is ~~turned~~ humid.

0621 - Keep L+G together - keep folks out that
aren't L+G. May need someone posted at
the door.

K. Lawson needs the information

#1 inspect Aux. spillway Inspection, validation
we will need info that of current
allows EMAs to return the public. damage.

DWR brains work differently - Don't weigh
worst case as heavily.

1-12

Matt: 70% there - re: clarity of what flights need to be out there - he is coordinating.

Drone is 20 min flight this AM now

No ships until 0800

PA+E, Solar Brothers, PJS

for dropping rock

SRC + DWR ordered.

↑
cost not incurred to CalFire

where can we only use privates to move the rock? would be more comfortable if yes.

yes - there is a plan in place. G. House - P. Whitlock

Director:

Need to collect necessary data to understand so the solution we propose is good.

Verifying - No birds fly 'til Matt says go.

Matt ASGS: has talked to PA+E. 90% there

20% was talking to vice guys.

Last 10% is talking w/ Pam. (PA+E)

Hony: Have a number of people coming that may want recon.

Matt: we do recon ^{during} missions all the time

Have 3 type 2 laptops available

Hony: Mission takes priority. - if we can work in recon, then go ahead.

0715 Matt-left room

~~Whitlock~~

Director:

Full ops, time sensitive + mission critical. I'll herd M. Anderson. Don't want him going around the LCS. I'm here to help. Need to be here or not?

Lawson: I think it is critical Director is here. to make big decisions

1-13

a. House

2 Monitoring groups - one under Planning
one under OPS

Director: Planning is key - need to make sure certain
projects are top priority.

Going through a shift change. - currently.

Complicates it a little.

Meeting Adjourn 6722 -
reconvene at 0730

02-13-2017

0742 - Director, Whitlock, & House, Biermann, Hony,
Lawson: Meeting. - Emergency spillway is
Emergency spillway.

Spillway structure is taller the closer it is to
controlled spillway. Bottom of unbraked spill
~60' deep on chart is 813'

reviewing drawings of monoliths.

Area of concern ~ 30'

If we lost a block - 25,000 cfs but it varies on which block

100,000 cfs if 4 blocks were gone.

If we saw that much water it would not be catastrophic - we could turn off controlled spill.

- But if there is piping (under) & laminar sediment, it's more troublesome.

Max 150,000 cfs - safely release matching what other releases are. (POC)

Hony - Clarify please.

Director - Only "what if"

Hony - Use of emergency spillway is off the table. ~~is~~

Director - It is holding water currently, not releasing water.

Lawson - Stay away from spilling over - emerg. spill.

House: 3 Days - have maintained status at Control Spillway.

Forecast - lake should be down ~ 30'

by Thurs.

Higher flows = shearing out over eroded area.

Lawson: will 30' be enough?

Director: Goal is to get to 84% I'm managing risk. Need to get to regulatory threshold.

Get powerlines off tower & remove tower.

want to get powerplant back online

2nd - burn at top of spillway - alluvial fan. Issue.

Today - game on - want to cut a channel through the alluvial.

- Issue in Russia - leveled a powerplant
cannot risk hydrology. - cant turn on plant
with too much water in tailrace.

Briemann Q - If we cant run the generators, what do we
use 813 what level until we cant get
↑ water out?

SWP summary.

Delta, not just water distribution to So-cal.

They have been pumping ^{at} red line. this year.

Just filled San Luis reservoir.

Give water to feds.

All contractors downstream are taking as much
as they can. A lot of water goes to rice
country OPD primarily here to Sac.
delivers. Agg.

Max is 4000 cfs after 813.

Director - allocation call needed.

100% this year? Numbers being run now.

Assume maybe that we could only use RWS?

Once we ^{can} get in chute, we can do some serious
work. - As long as we dont flood power plant.

Back to
Lawson Basics - will 30' buy us what we need
based on latest projections/forecasts?

Director - have a lot of spring runoff to handle.

Lawson: How many days on powerlines - 2.
How many days to make channel - ?

Can we run plant this week?

Need 230' of elevation in order to get significant
flow out of the plant
Rock
tailrace 252

1-16

Whitlock

To get the trench - we would have to shut off /
reduce flows @ control spill.

Weigh gains vs. losses. Lose a little to gain a lot.

Lawson: Right now - maintain 100K due to bad
forecast.

Once we get a clearer ^{attended} forecast of good
weather - then get tactical.

Director - series of storms - hopefully cold.

Lawson - requests chart - Phil to track down.
for 0900 meeting.

Henry: Try to ~~break~~ ^{dig} as much of a hole as possible.

Deterioration of control spill seems to have
stabilized. - At 55,000 cfs.

Ramped up to 100,000 cfs. - only been running
there for less than 12 hrs.

Is that enough to determine that stability
we saw at 55,000 will stay?

Director - Tower - is measurable - Based on current
observations - Yes. Stable.

Henry: If the 100,000 was unstable - we would have
seen degradation by now. Correct?

Yes.

could get asked.

- Why should we believe this is stable if we also
thought the Aux Energy Spill was stable?

Director: Don't know. Doing best we can w/ current
monitoring. There could be an issue later, it appears
stable now.

Hony: Have done a good job showing how critical the plant is.

Hony: Tailrace elevation is 6" from flooding the plant. was raising. - then stabilized.

Hony: mitigation?

Hony: Sand bags, sump pumps,
Digging is eminent. 10' deep trench.

Hony: Back to Em/Sp. Subject matter experts
Who are they? - Not names - disciplines.
Geologist
Geotech
Dam Engineers - PERC, DSO, + O&M
O&M experts
Geotech consultant

Do we have enough. Are they competent? Credentialed?

Director they did inspect last night. want to inspect again in the day.

Hony - Lake has dropped 3'. At that level, are we concerned about the pressure on the E/S?

No concern about pressure on blocks

Director - Concern last night was the foundation.

Stopped recession by stopping the water.

They are checking for piping & boiling.

Hony
Cathie Do we release evacuations before the lake drops 60'?

Lawson - rabbit trail
N. Vogel - telling us No, we don't need more PIOs.

~~we~~ we need more PIOs

Director will chase.

Meeting end 0838

02-13-2017

1133 - Intel Brief Meeting

Need.

Derfer + Parker + Honea, R. Barry, T. Whelwig
+ ~~DE~~ ICT

Seen site 3 today.

Rocks rattle.

Block rattle - episodic.

Shuffle until another block tumbles.

Large cracks between Scour holes. It is not
material that should see water.

Build a road, use rock trucks.

what we built before worked well.

Have time to put in temporary repairs.

Honea FERG Army, DSOD, DWK

Other folks still analyzing.

Need as many SMEs as we can.

All agree.

Ground is bad - cannot use E/S until it is fixed.
it is unreliable.

Crisis of confidence

Long term and a temp fix is needed.

Based on what you are telling me - ~~it could~~ if we
kept water on it, the situation would have been
much worse.

Things are dynamic + subject to change.

1-26

Does temp fix, if efforts to keep lake level low, fail, and it does come in to play.

Honea would temp fix hold?

IS+ where we can place rock - it will hold.
Need to be quick + efficient.

How long for repairs?

Need 2 days

PERC - what you are asking for, we can't answer.

RISKS are reduced - but can't guarantee.

Honea - can we let people back in and live with ourselves? YES.

MINDS work different, takes interrogation sometimes.
we have what we need.

Next Brief - ~~1330~~ 1400 - more intel

Go to work - start going

END 11:52

02-13-2017

- Director to meet w/ Sheriff.

J. DHS - assure you that Honea is on board.
He was the one asking all the questions
at the technical / intel meeting.

02-08-2017 to 02-11-2017

1730 – Live feed of Bill Croyle – froze a few minutes in.

1745 – distributed sit stat report to ICS Chiefs

1808 – Standing by for Conference Call.

Joel – engineers just performed inspection at spillway. Want to talk about hydrology and projections. Discuss new spill numbers. Then we can discuss thresholds and metrics.

John – status of storm – just passed peak inflow (1600-1700) inflows got up to 190000. Should start to see decreases from here. Current status is that there is 35,000 on the spillway and 7,000 through the plant. Updated projects as of 1400. Forecast was significantly wetter than previous forecast. Didn't get

quite as much flow out of Hyatt as desired. In order to not spill over E/S we need to make an adjustment to those releases. Suggestion of combined release rate of 55,000 cfs. Increase to 50,000 on the spillway. 15,000 cfs increase.

D. Panec – have metrics changed? We are at Station 30+50 at this point, upstream of breach looks good. Spillway is acting just as it should. Will continue to have erosion on the right side, left side is good. Going to 50,000 is anticipated and could occur but the monitoring needs to be spot on. It has to become seamless. We are working diligently to make sure everyone knows what they are looking at and that everyone is staffed. Need to safely monitor the headcut. The cut back rate appears to have slowed down.

Randy: do we need more monitors?

D. Panec: 10 more personnel coming from NRO. Making sure we have enough people for each shift. Request is that one of those people is an engineer or geologist.

J. Berringer: Scheduled through 1800 tomorrow.

J. Ledesma says if we need more personnel let him know. We can get more resources.

Based on last forecast, upping combined flows to 55,000 would barely cover us.

We really do not want the high voltage line to go down because Hyatt would be out for an extended period of time.

If we get a load rejection we could pop headcovers. Anything less than 20,000 over emergency spillway is lowest risk, some would say its highest risk. Can we lower the elevation in the diversion pool a few feet, then we only need to increase flows down the spillway by a few thousand and run the plant at full capacity.

Are there concerns with that? Pat cannot think of any of hand. Can't think of any downstream issues. Can we temporarily isolate the power canal?

Try to lower the tailrace and get all units back on, then that will minimize the spillway increase.

Assuming head differential trick works, it could pull sediment out. Sequence: diversion dam opened up, then go up on Spillway (5,000). Sending water down the emergency spillway at 10,000 to 20,000 cfs might be better than ruining the plant.

Power one over four is anchored in the same good rock. Erosion could get closer and still not take it out.

Duval – recommend opening Diversion dam to lower diversion pool so that we can

Sheriff - open up the diversion dam – send more water down the system? Yes. What kind of increase will that cause? 2) director told him that every effort was to avoid the emergency spillway. Sounds like this plan may see the emergency spillway as a solution. M. Anderson responds – no. We do not want to

use the emergency spillway. Need advanced public notice, inundation maps, flowrate in the lowflow, etc. Does this new plan push out the emergency spillway? Yes it does.

Should inform the public that we are trying to avoid using the spillway, but there may be the potential that the emergency spillway gets used. If we do nothing, it is possible that we will hit the emergency spillway midnight tomorrow night.

We can't sit on the information – the information needs to get out. Get information to E. See and he will get it to Sheriff. You should be getting updates every 6 hours when new forecasts come out. Downstream control is 180,000 cfs – but it's not commonly seen and the public just needs to be aware.

In 1997 we had 160,000 cfs. We are looking at 50,000 to 70,000. Social media is different now and we need to be more prudent about getting good information out there.

Pat: We've already provided direction to senior operator to lower the Diversion Dam. Bruce is on phone talking to senior operator. He's probably working with POC to make it work.

Tower 1-4: should we increase spillway flows? With possible potential of losing Tower 1-4. Lets go up 5,000 on Spillway and monitor.

1850- 6k out Diversion Dam happening now

J. Royer – I would feel better going in 5000 increments.

Joel – clarifying that there are metrics in place for lateral cutting.

Do we have concern about the tower – the foundation is on rock. No concern presently.

HDR – rate of erosion is drastically reduced (1/5th what it was). Assuming same erosion propagates, we have 200 feet right now. How long can we use the spillway? Thought we could go to station 18 – it's 1200 feet away.

What happens if we go from 35,000 to 42,000 is not much of an increase.

DSOD and FERC seem to be in concurrence. Station 18 is reasonable.

Go to 42000 on gated chute – suggested.

Call moved to a new location because DOC is on line at 1900.

02-08-2017 to 02-11-2017

1400 - FOC Call IN

Dozens of People Calling in

E. See: Now have a daily update meeting at 10:00 at DPR to touch base with emergency responders. Intended primarily for event we are having locally. Oroville Dam Spillway, not a flood response ICT. Flows we are releasing now are not that high. We've released flows this high in the past. Misconceptions in media about flooding here in Oroville. Not floodstage releases in Oroville. Regarding our Emergency Spillway, with latest forecast we are hoping we do not need to use the Emergency Spillway. We are not anticipating releases going above 65,000 cfs today, it may go a little higher, but not by much. Sheriff Hony – set up trigger points of when he should be notified to get his people ready. Established number at 80,000 cfs. So, if Oroville releases hit 80,000 he will begin planning for a possible flooding situation. He has to plan for worst case scenario. Helpful for us – are there downstream trigger points?

Question: How long does Oroville feel like they can pass 65,000 safely? Is there a point in the future when we would cut back?

Response – would continue to spill until we are unencroached in our Army Corp reserve. It depends on Monitoring.

Question: Rate of erosion approach thresholds within next 10 days?

E. See: Right now, expect that there is hard rock and should be able to continue to spill. If we are going to spill, it would be a very small spill. Does not mean there will be a flood.

Question: Does 80,000 scare anyone?

M. Murray: Triggers local law enforcement here in Oroville.

FOC-Everything is subject to change – what kind of notice or heads up can flood center expect the flow to go to zero.

No certainty in river flows or forecasts - getting a heads up on release changes is important. Can FOC get an update as soon as possible?

M. Murray - Brian Smith from FOC is stationed here. He should be the point of contact. Also Blackboard Connect notifications are made.

Wendy - Every 6 hours the forecasts are being done.

FOC – biggest concern is debris

E. See – if debris gets passed the boom lines (large woody debris) it would likely be stopped at the Diversion Dam. The clearing occurring now is preparatory/cautionary.

SBFCA – next event? Possibly another atmospheric event? At some point we can't operate the gated spillway, what happens next if we can't use the gated spillway and are left to the mercy of the emergency spillway? Are there any other trends that look like this may be a unique year.

NWS – river forecast center are issuing inflow forecasts – 5 days worth of forecast. They are being provided information as much as we can.

Suppose we could look at trends and some of the past years data. Long term modeling is not accurate beyond 7 days. At the FOC we look at the weather system by system.

Forecasted Coordinated Operations Program – excellent communication going on – call every day since January 5, 2017.

E. See – How do we get that information to the responders? – that is a key element, need to bridge that gap. Eric to call: 530-741-5015

Should we use same trigger (80,000) point for you downstream?

M. Murray – will have Brian Smith relay release changes immediately – even if contemplated.

SBFCA – Are we able to monitor rate of erosion in real time? With water on the spillway it's covered. Some things we can see visually. But to see anything in detail we would need to shut it down. We still have quite a ways to go before we hit any triggers.

From where original problem started to where it is today?

K. Dossey – approximately 200 feet. Reached better good rock under the spillway.

8 hours to Gridley.

They will email link to the travel time after the meeting or they could look in the FERC EAP or they can check cdec.

Reclamation district – impacted by Shasta and Oroville – is there communication between Shasta and Oroville. Positioned slightly upstream of Fremont Weir. At this point we are not looking at inflows that rival 1997.

Averaging moderate flow to high flows.

Oroville to Marysville is 24 hours.

Yolo County – monitoring effects of debris if they spill over the emergency spillway.

K. Dossey clarified – in FERC EAP, dam failure, initial wave is 14 hours from Oroville to Marysville.

Can we take the flow higher out the spillway?

E. See – balance concern for erosion, hydrology, engineering, etc. Prepared to have the discussion, they are comfortable with the 65,000.

Three rivers – what is capacity of gated spillway?

E. See & Dossey: 500,000 cfs is capacity of emergency spillway. Probable maximum flood. That's with 16' of water going over it.

Need for this call tomorrow? Don't see a need.

Another press conference tomorrow? E. See – maybe. Two press releases a day, updates via social media.

1457 – END OF CALL

02-08-2017 to 02-11-2017

0400 – Email from Bill Croyle

Bill Croyle emailed Gina if locals have been notified if the emergency spillway will need to be used

The deputy mentioned that he already notified the Sheriff. He will contact the police if he has a concern.
Phil mentioned Gina to ask Bill if anyone else should be notified.

02-11-2013

2/11

M. Anderson - 0238 - Need better monitoring
continuous all day.

- Need a guy here from J. Lehigh.

- Direct communication w/ someone that can put
it on the board.

- Underwriting to public

↳ Sheriff is hearing 3,300 = 33,000.

at 80,000 - its the trigger - will get
there today.

Inflow vs spillway - differential builds
head. Eventually it will go over, not
at same rate going in.

10,000 cfs Aux spill
up to for up to 2 days

think it will be 1 day. J. Lehigh

Don't have ability to monitor

Recommend to deenergize tower: PHWT

Plant is secured.

Cannot determine risk to 1/4

0744 Left meeting to follow Pat

0800 J. Ledesma. Director + Sheriff meeting
- hopefully relayed info they need.

Need table from A. Miller in reverse.

0927

M. Anderson just came in

Can see the debris - Boulder Bar

Down hill is completely clear

Do we need to see it from the air?

Explosive plan might not work.

Might have plan to increase that flow.

Debris Dam - opportunity to knock.

↳ think we can relieve the tailrace?
Potentially accessible. Saves plant
and increase flow down river

Can't jeopardize tower.

Attempt to reestablish the plant. ~~#~~

Keep plant

Sheriff - problem w/ plant - need to start
talking to media about it.

1 Transparency

Anderson - we explained when tailrace is high,
we can't generate.

People don't understand the gravity.

Get something for B. Croyle.

operation - debris in Div. Pool. continuing

1' outtopping 12-13K ³⁶ hr. peak at 2100
55 cfs middle range.

range on discharge - range on Q range on time.

New Forecast - Consistent

Max Elev: 1' to 1.5' above weir.

Max Flow 6 to 12,000 cfs.

Don't have time

Duration → 38 to 56 hrs

0900 estimate of clear flow

144 cfs at ~~2100~~ 0800

668 cfs at ~~2100~~ 0900

Inflow @ 0900 89,000 cfs

Next call at 1230. Call End 0937

→ Sheriff's expose vulnerability - security concern?
M. Smith question) Facility concern.?