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UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF CALIFORNIA
REDDING OFFICE

CALVARY CHAPEL OF UKIAH, a California Non-Profit Corporation; **CALVARY CHAPEL FORT BRAGG**, a California Non-Profit Corporation; and **RIVER OF LIFE CHURCH**, a California Non-Profit Corporation,

Plaintiffs,

vs.

GAVIN NEWSOM, in his official capacity as Governor of California; **SANDRA SHEWRY, MPH, MSW**, in her official capacity as California Public Health Officer; **NOEMI DOOHAN, M.D.**, in her official capacity as Public Health Officer, Mendocino County; and **NGOC-PHUONG LUU, M.D.**, in her official capacity as Butte County Public Health Officer,

Defendants.

Case No. 2:20-cv-01431-KJM-DMC

PLAINTIFFS' REPLY BRIEF IN SUPPORT OF THEIR MOTION FOR PRELIMINARY INJUNCTION

Date: November 6, 2020
Time: 10:00 a.m.
Courtroom: 3
Judge: Hon. Kimberly J. Mueller
Action Filed: July 15, 2020

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I. Plaintiffs are likely to succeed on their claims.

In April, the State of California argued that (1) "[a] public health crisis should not be used as an excuse" to restrict constitutional rights; (2) the pandemic does *not* alter the rigorous level of scrutiny applied to laws that restrict such rights; and (3) the existence of other "strategies that States can pursue to slow the transmission of COVID-19" can show that the policy at issue is "unnecessary to advance the State's asserted interest in protecting the public health."[1] Here, by contrast, Defendants suggest that fundamental rights should be largely ignored for as long as the pandemic exists. Ample precedent supports California's former insistence on vigorous protection of such rights even during the most trying times.[2] The Ninth Circuit has held that district courts may: carefully review whether government actions related to the pandemic are constitutional, reject the government's evidentiary and legal arguments, and enjoin violations of constitutional rights.[3] Similarly, the U.S. Department of Justice has emphasized that "[t]here is no pandemic exception" to the Bill of Rights, which "are always in force."[4] Although courts have rejected some challenges to restrictions on church activities, courts have also sided with plaintiffs in other cases, as recently as October 15.[5] As one decision put it, although "judicial scrutiny may recede to its lowest ebb" in the earliest weeks of a crisis, "when a crisis stops being temporary, and as days and weeks turn to months and years, the slack in the leash eventually runs out."[6]

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[1] Br. of New York, California, et al. at 2-5, 8, 17-21, *In re: Greg Abbott*, No. 20-50264, (5th Cir. 2020), https://ag.ny.gov/sites/default/files/planned_parenthood_v._abbott_amicus_brief.pdf.

[2] *See, e.g., Hamdi v. Rumsfeld*, 542 U.S. 507, 532 (2004) (plurality) ("It is during our most challenging and uncertain moments that our Nation's commitment to due process is most severely tested."); *Menotti v. City of Seattle*, 409 F.3d 1113, 1141-42 & n.55 (9th Cir. 2005).

[3] *Roman v. Wolf*, 2020 U.S. App. LEXIS 32236 (9th Cir. 2020) (affirming, in part, an injunction protecting constitutional rights); *Ahlman v. Barnes*, 2020 U.S. App. LEXIS 20801, at *8-10, n.8 (9th Cir. 2020) (the district court credited plaintiff's evidence that the government's actions were inconsistent with CDC guidance); *Harvest Rock Church v. Newsom*, 2020 U.S. App. LEXIS 31226, at *3-5 (9th Cir. 2020) (the district court applied traditional constitutional analysis, and had discretion to credit unrebutted evidence in the record).

[4] *Wis. Legislature v. Palm*, 2020 WI 42, P53 (quoting the Department).

[5] *Denver Bible Church v. Azar*, 2020 U.S. Dist. LEXIS 195607 (D. Colo. 2020).

[6] *Capitol Hill Baptist Church v. Bowser*, 2020 U.S. Dist. LEXIS 188324, at *21-22 (D.D.C. 2020); *Calvary Chapel Dayton Valley v. Sisolak*, 140 S. Ct. 2603, 2608 (2020) (Alito, J., dissenting from denial of injunction) ("It is a considerable stretch to read [*Jacobson v. Massachusetts*, 197 U.S. 11 (1905)] as establishing the test to be applied when statewide measures of indefinite duration are challenged under

Regardless of what standard is applied, the worship ban is unconstitutional. Even under *Jacobson*, "there are 'broad limits' which may not be eclipsed," and laws that "result in the curtailment of fundamental rights without compelling justification" are invalid.[7] As Defendants acknowledge, Plaintiffs' challenge *is far narrower* than challenges brought in other cases.[8] Plaintiffs *do not* challenge attendance limits, mask or distancing mandates, or the ability to shut down various activities altogether in counties experiencing a high infection rate. Rather, as recognized by the CDC and the World Health Organization (WHO), and as confirmed by *Defendants' own evidence*, wearing masks, limiting crowd size, distancing, and/or good ventilation can ensure that singing or chanting indoors is safe, and the effectiveness of such measures shows that there is no need for the worship ban. *See also* Declaration of Dr. Jayanta Bhattacharya, ¶ 18 ("Plaintiffs can safely hold indoor worship services that include singing and chanting by following CDC guidelines."); *id.* at ¶¶ 14, 16, 32. Defendants offer *no evidence* that singing indoors while using such protocols poses *any* risk of a "super-spreader" event, and they ignore the fact that the worship ban is contrary to CDC and WHO guidance. There is no compelling, scientific, or otherwise defensible reason to ban *all* singing and chanting at indoor services. Further, Defendants allow activities that are as safe as, or are riskier than, singing at an indoor church service.

A. The worship ban is contrary to CDC guidance.

The parties agree that, in light of "the severe economic and societal consequences" of overly restrictive limitations on activities, the government should rely on CDC reports, as well as studies concerning "the need for and effectiveness of social distancing measures," to assess whether specific

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the First Amendment. . . ."); *Roberts v. Neace*, 958 F.3d 409, 414-15 (6th Cir. 2020) ("While the law may take periodic naps during a pandemic, we will not let it sleep through one.").

[7] *Soos v. Cuomo*, 2020 U.S. Dist. LEXIS 111808, at *21-22 (N.D.N.Y. 2020) (discussing *Jacobson*); *Ramsek v. Beshear*, 2020 U.S. Dist. LEXIS 110668, at *33-34 (E.D. Ky. 2020) (it is consistent with *Jacobson* to require the government to utilize narrowly tailored means of reducing the spread of COVID-19, rather than resorting to unnecessary bans on First Amendment activities).

[8] For instance, in *S. Bay Utd. Pentecostal Church v. Newsom*, 2020 U.S. Dist. LEXIS 191468 (S.D. Cal. 2020), the plaintiffs *challenged an attendance cap*, so the court was presented with the issue of what risks are posed by *large, crowded* gatherings. *Id.* at *3-4, 10-11, 24-29. Here, Plaintiffs rely on extensive evidence that any risks posed by indoor singing can be mitigated through safety protocols, including distancing and attendance caps. *Cf. Harvest Rock*, 2020 U.S. App. LEXIS 31226, at *7 (O'Scannlain, J., dissenting) ("[W]e are neither bound nor meaningfully guided by the Supreme Court's decision," "unaccompanied by any opinion of the Court," to deny a writ of injunction in *South Bay*).

measures are necessary. Watt Exh. 4 at 4. The worship ban *itself* repeatedly cites to CDC guidance. Watt Exh. 26 at 3, 5-7, 13, 14. Numerous CDC publications confirm that there is no need for a blanket ban on all singing and chanting at indoor religious services. For instance, the CDC recently reiterated that wearing a mask "helps reduce the risk of spread both by close contact and by airborne transmission," and also emphasized the effectiveness of distancing, good ventilation, and limiting crowd size.[9] The CDC has explained that, since COVID-19 spreads "mainly from person-to-person . . . [b]etween people who are in close contact with one another (within about 6 feet) . . . [t]hrough respiratory droplets," distancing, wearing masks, and washing hands are effective means of limiting the spread. Watt Exh. 17 at 1-2.

Similarly, in a recent scientific brief (which Defendants ignore), the CDC reiterated that "the principal mode" by which COVID-19 is spread is "exposure to respiratory droplets . . . produced during exhalation" "when someone is close to the infectious person." Pls.' Exh. 4 at 1. Although in certain "uncommon" "special circumstances," "[i]nadequate ventilation" can facilitate airborne transmission, the CDC noted that "most infections are spread through close contact, not airborne transmission," and "[t]here is no evidence of efficient spread . . . to people far away or who enter a space hours after an infectious person was there." *Id.* The CDC emphasized that there are effective ways to stop the spread, including when indoor singing is involved:

> *Existing interventions to prevent the spread of SARS-CoV-2 appear sufficient to address transmission* both through close contact and under the special circumstances favorable to potential airborne transmission. Among these interventions, which include social distancing, use of masks in the community, hand hygiene, and surface cleaning and disinfection, ventilation and avoidance of crowded indoor spaces are especially relevant for enclosed spaces. . . .

Id. (emphasis added). Notably, the CDC's guidance does *not* suggest that indoor singing should, or must, be banned. Defendants do not argue that the CDC is wrong; rather, Defendants ignore the conflict between the worship ban and the CDC's guidance.

B. The worship ban is contrary to the World Health Organization's guidance.

WHO has emphasized the importance of allowing religious gatherings: "Mass gatherings are not merely recreational events; they have important implications on the psychological well-being of large

[9] Pls.' Exh. 2 at 2 (cited at Watt Decl. (Dkt. #39), ¶ 29); Pls.' Exh. 3 (cited at Watt Decl., ¶ 40). The attached Plaintiffs' Annotated Bibliography briefly discusses numerous CDC and WHO publications and other sources relied upon by the parties. The Bibliography is attached to the brief, rather than being filed separately, because the brief uses short citations for some sources.

number of individuals (*e.g.* religious events)." Pls.' Exh. 5 at 1. WHO's "risk assessment tool" for religious events includes a risk evaluation checklist with many questions, such as the location of the event and whether it will include higher-risk practices such as the touching of artifacts or other attendees. Pls.' Exh. 6 at 4-8. Additionally, a risk mitigation checklist includes several dozen questions that focus on the implementation of safety measures such as wearing masks and distancing. *Id.* at 9-21. *Conspicuously absent* from WHO's risk mitigation and evaluation checklists *is any mention of singing or chanting*. Another WHO publication notes that measures such as distancing, wearing a mask, and cleaning hands are effective to stop the spread since "[p]eople who are in close contact (within 1 metre) with an infected person" can be infected through droplets released "when an infected person coughs, sneezes, speaks or sings." Watt Exh. 5 at 1. In sum, Defendants offer no evidence that WHO's determination that safety protocols can ensure that indoor religious events that include singing are safe is incorrect.

C. Substantial evidence confirms that indoor singing and chanting can occur safely.

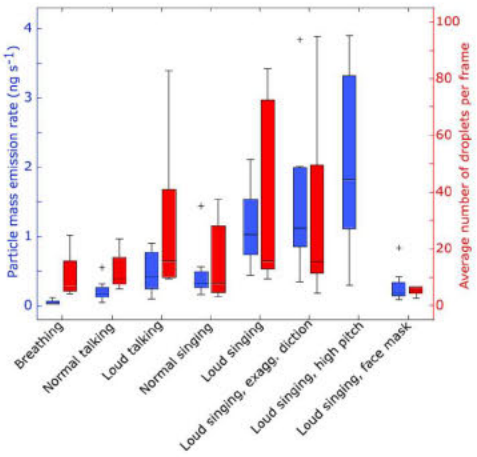
Many studies show that any risks posed by indoor singing/chanting can be mitigated.

1. Wearing Masks

The use of face masks is "associated with a much lower risk of infection," Watt Exh. 18 at 2, and wearing masks "is a critical public health measure that will reduce transmission of COVID 19 and save lives." Ruth. Decl. (Dkt. #40), ¶ 84. As one court noted, "the widespread use of masks safely and meaningfully reduces COVID-19 transmission . . . especially indoors."[10] Defendants Newsom and Angell have emphasized that masks are highly effective at stopping the spread.[11] Additionally, Rutherford Exhibit 25 (Alsved) notes that "there is presently almost no scientific evidence of increased particle emissions from singing." *Id.* at 2. Although *maskless* emissions increased with volume (whether talking or singing), the emission rate for loud singing *with a mask on was miniscule*: the mask "reduced the amount of generated aerosol particles from singing to a level similar to normal talking," and the camera detected almost no droplets. *Id.* at 4. The following chart (*id.* at 3, Fig. 1) illustrates the high effectiveness of masks while singing:

[10] *United States v. James*, 2020 U.S. Dist. LEXIS 190783, at *2-3 (D. Ariz. 2020); *cf.* Pls.' Exh. 7, 8.

[11] Watt Exh. 24 at 1-2; *see also* Ruth. Decl., ¶¶ 85, 87; Watt Decl., ¶¶ 38, 51-54, 73; Watt Exh. 23. Other evidence further demonstrates the high effectiveness of masks. Watt Exh. 20; Pls.' Exh. 14, 15; *cf.* Watt Exh. 7 at 4; Bell Exh. 1 at 7; Bell Exh. 3 at 45; Fisher.



Watt acknowledges that "face coverings can reduce the number of particles that are released during singing," but asserts that there is still some risk because masks do not *completely* stop *all* particles from being emitted. Watt Decl., ¶ 54; Dkt. #33 at 14:22-15:1. This focus on the effectiveness of *the singer's* mask ignores the fact that masks worn *by other attendees* offer them exponentially more protection; as Rutherford's recent publication notes, "there is a strong relationship between public masking and pandemic control" because masks can "*protect the wearer from becoming infected*," in addition to reducing particle emission.[12] Additionally, Defendants' statement that wearing masks, *without taking other precautions*, does not fully *eliminate* risk (Ruth. Decl., ¶ 86) ignores the fact that the effectiveness of masks is multiplied when coupled with other precautions. For instance, the Alsved study concluded that singing can safely occur indoors if "appropriate control and prevention measures are applied," such as wearing masks, distancing, and ventilation.[13]

The high effectiveness of masks, even when distancing is not maintained, is illustrated by what happened at a Missouri hair salon. Two stylists who were symptomatic provided haircuts, facial hair trimmings, and perms—services that require close personal contact, while carrying on conversations, for extended periods of time—to 139 clients. Pls.' Exh. 7. These stylists, and 98% of their clients, were wearing face coverings during their interactions, and an investigation found that "*no COVID-19 symptoms were identified* among the 139 exposed clients or their secondary contacts." *Id.* (emphasis

[12] Pls.' Exh. 9 at 1 (emphasis added); Pls.' Exh. 10 at 3-4; Pls.' Exh. 11 at 1; Ruth. Decl., ¶ 83.
[13] Ruth. Ex. 25 at 5; Pls.' Exh. 12 at 1 ("Singing doesn't need to be silenced . . . [T]he wisest thing is to sing with social distancing in place."); Pls.' Exh. 13.

added). The CDC found that "wearing a mask prevented the spread" in this case. Watt Exh. 21 at 1. In sum, Defendants have produced no evidence that shows that the wearing of masks, coupled with other precautions, cannot eliminate any risks posed by indoor singing.

2. Physical Distancing

Since "most infections are spread through close contact," Pls.' Exh. 4 at 2, "[l]imiting face-to-face contact with others is the best way to reduce the spread," Bell Exh. 1 at 15, and distancing has "been successful in reducing the number of persons infected." Watt Decl., ¶ 47; Dkt. #33 at 3:4-8. Any risk posed "by breathing, singing, chanting, talking, laughing, coughing, or sneezing" can be "substantially decrease[d]" by implementing distancing, which sharply decreases the amount of time that people are in close proximity.[14] Rather than questioning the effectiveness of distancing, Defendants' discussion of church services *assumes sustained, close proximity* in an overcrowded setting. For instance, Rutherford's assumption of a crowded service, in which people are in close proximity to each other, was used to magnify the risks of singing, minimize the effectiveness of masks, and distinguish other activities that are assumed to be using safety protocols.[15] Similarly, the argument that singing can create "a sufficient 'viral load'" to spread COVID-19 *assumes* that "people are in close proximity to one another" in a "large gathering" "for an extended period" in a poorly ventilated setting,[16] but Defendants admit that greater distance "can increase the possibility of dispersion of the virus and reduce the viral dose that people may be exposed to." Watt Decl., ¶ 37. Further, even if loud (maskless) singing could cause droplets to fall to the ground within 12 feet, rather than 6 feet,[17] that possibility could be addressed by *increased* distancing

[14] Watt Decl., ¶¶ 37-39, 43, 47, 48. Distancing is "associated with a much lower risk of infection," Watt Exh. 18 at 2; Ruth. Exh. 4 at 16, and also multiplies the effectiveness of other safety measures, such as wearing masks. Pls.' Exh. 16 at 8; Pls.' Exh. 17 at 2.

[15] Ruth. Decl., ¶¶ 48, 56, 58, 63, 67, 71, 72, 76, 93; *id.* at ¶ 62 (stating that attendees at indoor services "generally assemble close together in one space, seated in a series of many rows (or pews) that are physically very close together, making close proximity of many individuals highly likely").

[16] Dkt. #33 at 3:12-19, 9:6-17; Watt Decl., ¶¶ 37, 44, 45, 68. Although the amount of particles produced by speaking, yelling, singing, breathing, etc., is dependent upon the volume, force, and duration of the activity and the number of participants, Asadi; Watt Decl., ¶ 45; Ruth. Decl., ¶¶ 49, 55-58, the worship ban broadly applies to *all* singing or chanting at indoor services, regardless of volume, duration, number of participants, and whether masks are being worn.

[17] Ruth. Decl., ¶ 28. It appears that Rutherford is referring to *maskless* singing since wearing a mask slows particle emission, Ruth. Exh. 25, and increases the effectiveness of distancing. Pls.' Exh. 13 at 5.

(and wearing masks). In sum, distancing can mitigate any risks posed by indoor singing.

3. Ventilation

The parties agree that ventilation is a highly effective way to mitigate risks posed by talking, singing, or breathing indoors.[18] One study found that (1) singing does not produce substantially more particles than speaking at a similar volume, (2) quiet singing is not "significantly different to breathing," and (3) attendance caps and good ventilation can mitigate risks posed by speaking or singing.[19] Although the worship ban is premised upon fears about aerosol transmission, Defendants offer *no evidence* that the CDC is wrong in terms of the minimal risk posed by aerosol transmission, or the effectiveness of safety measures like good ventilation.[20] Rather, Defendants *assume* that a church service occurs in a closely-packed, poorly ventilated setting. Ruth. Decl., ¶¶ 50, 65, 71, 73. Ventilation is an additional, effective safety measure that illustrates the lack of any need for the worship ban. Pls.' Exh. 18, 20.

D. Defendants have offered no evidence that wearing masks, physical distancing, and/or adequate ventilation do not mitigate any risks of indoor singing or chanting.

The worship ban is premised upon the claim that "singing and chanting negate the risk-reduction achieved through six feet of physical distancing," Pls. Exh. C at 3, but Defendants have provided no evidence to support that claim. Many of the studies and articles relied upon by Defendants discuss the emission of particles and/or the spread diseases *in the absence of masks, distancing, and/or proper ventilation*, such as in the case of "super-spreader events." As *Defendants' own evidence shows*, these events have had some or all of the following characteristics: little to no face mask usage, close proximity to others, repeated physical contact, overcrowding, poor ventilation, and/or individuals who were symptomatic at the time.[21] The Bhattacharya Declaration confirms that, although Rutherford and Watt

[18] Pls.' Exh. 19 at 5 ("In general, ventilation will clear the viral aerosols fairly quickly."); Ruth. Exh. 3.
[19] Pls.' Exh. 21; Pls.' Exh. 22 at 4 (venues that have singing can "operate safely . . . by ensuring that spaces are appropriately ventilated").
[20] Rutherford incorrectly asserts that a restaurant outbreak was one of "the first documented instances of aerosol transmission outside of a hospital environment." Ruth. Decl., ¶¶ 29, 59, n.3; Ruth. Exh. 3. To the contrary, the study "excluded the possibility of aerosol transmission," and found that droplet transmission, aided by poor ventilation and close proximity, likely caused the spread. Pls.' Exh. 23 at 3. As such, the study "recommend[ed] strengthening temperature-monitoring surveillance, increasing the distance between tables, and improving ventilation." Ruth. Exh. 3 at 2.
[21] Ruth. Exh. 12, 18-20, 23; Watt Exh. 6, 12-16, 25; Pls.' Exh. 24 at 5; Ruth. Decl., ¶ 36 & Watt Decl., ¶ 46 (Defendants' examples involved "individuals in close physical proximity to each other").

focus on "the risk posed . . . by public gatherings where few precautions are taken (such as mask wearing or social distancing)," "none of the evidence that they present" suggests that indoor church gatherings (including those that include singing or chanting) that implement "appropriate precautions" recommended by the CDC pose a high risk. Bhattacharya Decl., ¶ 14. As such, and as discussed previously, the CDC, WHO, and numerous studies have concluded that wearing masks, distancing, proper ventilation, and avoiding overcrowding mitigate the risk of super-spreader events.[22]

To illustrate, a study of the Washington choir practice found that *singing can safely occur indoors* by using protocols such as wearing masks, proper ventilation, and capping attendance. Pls.' Exh. 25 at 2, 7-8. Another study highlighted ill-advised practices at the event: attendees "had an intense and prolonged exposure" that included contact with a *symptomatic* contagious participant, "singing while sitting 6–10 inches from one another," "sharing snacks, and stacking chairs at the end of the practice." Watt Exh. 13 at 1, 3, 4. Notably, this study *did not* recommend the banning of indoor singing, but rather noted the importance of distancing, mask wearing, and excluding symptomatic individuals. Further, in an article cited by Defendants, the CDC and local health officials noted "the importance of physical distancing" in light of the sustained, close contact at the event.[23] Moreover, none of the other events relied upon by Rutherford and Watt,[24] or cited in Defendants' brief,[25] support the purported need for the worship ban.

Additionally, the main high-profile events relied upon by Defendants (South Korean church services, and a Washington choir practice) occurred relatively early on, when the public had minimal knowledge about COVID-19 and the importance of using safety protocols. Baker; Watt Exh. 3 at 5 ("[T]he reproduction number . . . changed considerably when populations became fully aware of the threat.").

[22] *See, e.g.,* Watt Exh. 11, 14; Ruth. Exh. 7, 13, 20; *cf.* Asadi and Lednicky (these studies did not examine the effectiveness of protective measures like wearing masks).

[23] Baker. The suggestion that this event shows that singing cannot occur safely indoors is contrary to the evidence and the CDC's findings. Watt Exh. 13; Pls.' Exh. 25 at 2, 7-8.

[24] Watt Exh. 15 (South Korean church held crowded basement services that included extended close proximity); Watt Exh. 14 at 4 (churches can prevent spread by "implement[ing] the U.S. Government's guidelines"). Additionally, Defendants' sources concerning tuberculosis and other infections simply reinforce the importance of wearing masks, distancing, avoiding overcrowding, and good ventilation. Ruth. Exh. 14, 15, 17, 21, 22. Further, research concerning tuberculosis, for which "airborne transmission is a highly efficient mode for spreading infection," is of minimal relevance since airborne transmission is very *unlikely* with respect to COVID-19. Pls.' Exh. 4 at 2; Ruth. Decl., ¶ 28 & Watt Decl., ¶¶ 27-28.

[25] Dkt. #33 at 19-20 (non-scholarly articles about opponents of masks, services in which "[p]articipants were close enough to rub shoulders and no one was wearing face coverings," and other anecdotes for which little to no detail was provided about whether safety measures were taken).

Defendants' evidence concerning the film industry further confirms that safety protocols can ensure that indoor singing is safe.[26] Moreover, during the indoor memorial service held in Atlanta for civil rights icon John Lewis, which was attended by former Presidents and other public officials, *attendees sang shoulder-to-shoulder while several individuals without masks sang on stage*.[27] Similarly, indoor memorial services for Justice Ginsburg, which were attended by Supreme Court Justices and other government leaders, included singing and chanting.[28] These services provide further proof that singing can safely occur indoors, and there is no need for the worship ban, which is not narrowly tailored.[29] As such, it violates Plaintiffs' freedom of speech, and other constitutional rights, and should be enjoined.[30]

E. The government's preferential treatment of outdoor political protests, and other activities, further supports the granting of Plaintiffs' motion.

The fact that an event occurs outdoors *does not make it safe*; otherwise, Defendants would not prohibit various outdoor activities, or encourage wearing masks and distancing outdoors. Although an outdoor event may require fewer protocols than a similar indoor event to be safe, *both types of events can*

[26] Crabtree-Ireland Decl. (Dkt. #34), ¶¶ 6-7; Watt Decl., ¶ 107. The industry and union proposals discussed the effectiveness of various safety measures without mentioning singing as an activity to be minimized. Bell Exh. 1, 2. In fact, the union proposal noted that outbreaks connected to musical events and community gatherings "could have been prevented by planning with best practices." Bell Exh. 2 at 3. The agreement *allows* "group voiceover/ADR/looping and singing." Bell Exh. 3 at 37, 58. Individuals who use a recording booth by themselves for under fifteen minutes are exempt from any testing requirements. Bell Exh. 3 at 37. *Production costs and difficulties*, not safety concerns, are why there is currently an absence of productions involving large groups of singers. Bell Decl. (Dkt. #38), ¶¶ 7-10.

[27] NBC News, https://www.youtube.com/watch?v=heb1qB_MfxU, at 3:35:30; *see also id.* at 43:43, 1:53:45, 2:48:00. Indoor services that were held in Troy, Selma, and Washington D.C. also featured singing. Washington Post, https://www.youtube.com/watch?v=gA0myGHUdN0, at 44:12, 44:55 (multiple maskless singers on stage; invited the audience to sing along); *id.* at 30:57; Washington Post, https://www.youtube.com/watch?v=2S2h_HO45vg, at 38:36, 56:40, 1:27:00, 1:51:38; NBC News, https://www.youtube.com/watch?v=MJ3cxh8MA7c, at 2:30:40, 2:39:20.

[28] CNBC Television, https://www.youtube.com/watch?v=ttCUULDUDpU, at 33:45, 38:15, 47:00; CBS News, https://www.youtube.com/watch?v=swHq_5ADC2w, at 9:10, 14:50.

[29] *Ramsek*, 2020 U.S. Dist. LEXIS 110668, at *27-30 (enjoining restriction on gatherings because it was not narrowly tailored; "policymakers have some [other] tools at their disposal," such as distancing and mask mandates, that "will help mitigate the spread of coronavirus while still allowing . . . [the exercise of] First Amendment freedoms"); *Cty. of Butler v. Wolf*, 2020 U.S. Dist. LEXIS 167544, at *44-47 (W.D. Pa. 2020) (a restriction that took "a one-size fits all approach" was unconstitutional; it burdened substantially more speech than was necessary to prevent the spread of COVID-19).

[30] Since Plaintiffs' free speech claim does not require a showing of disparate treatment, Dkt. #19 at 12, the Court could grant the motion based solely on the lack of any need for the worship ban.

be safe, or unsafe, depending on other factors, such as what safety protocols are used. Pls.' Exh. 13 at 5; Watt Exh. 10 at 5. If the government does not ban "nonreligious conduct that endanger[s] [its] interests in a similar or greater degree than [religious conduct] does," its actions are unconstitutional.[31] As such, the suggestion that outdoor protests, or other activities encouraged or allowed by Defendants, should be ignored is untenable; the key issue is not the *location* of the activities, but whether they can pose *an equal or greater risk* than indoor singing or chanting.

In the original worship ban, Defendants claimed that, even with the use of "strict physical distancing measures," *religious* singing and chanting is so dangerous that it must be prohibited *in all circumstances*, even outdoors: "Places of worship must . . . discontinue singing and chanting activities." Dkt. #15-1 at 4. Conversely, Defendants' guidance for outdoor protests does not ban singing and chanting, only *encourages* distancing, and only requires the wearing of masks "[w]hen you can't maintain a safe physical distance."[32] Further, it is undisputed that Defendants have repeatedly encouraged protests (Dkt. #19 at 4-5), the State has declined to enforce restrictions "against thousands of gathered protestors,"[33] and protests have contributed to the spread of COVID-19. For instance, the drivers of Riverside County's elevated transmission rate included "potential transmission at public protests with large numbers of people in close proximity without face coverings. Watt Exh. 10 at 5. Tellingly, Defendants ignore the fact that the California Public Health Officer confirmed, shortly before the worship ban was issued, that crowded protests were likely "a contributor" to increased spread, and emphasized

[31] *Stormans, Inc. v. Selecky*, 586 F.3d 1109, 1134 (9th Cir. 2009); *Victory Processing v. Fox*, 937 F.3d 1218, 1228 (9th Cir. 2019); *IMDb.com v. Becerra*, 962 F.3d 1111, 1126-27 (9th Cir. 2020).

[32] Watt Exh. 28 at 6-7. The original worship ban was later changed to allow outdoor singing and chanting, but it highlights the discriminatory nature of the current ban, and shows the incorrectness of the claim that banning singing in indoor services is the only way to keep attendees safe. *See Soos*, 2020 U.S. Dist. LEXIS 111808, at *31-32 (encouraging outdoor protests, and lax enforcement when protestors do not comply with restrictions, "sent a clear message that mass protests are deserving of preferential treatment"); *Penkoski v. Bowser*, 2020 U.S. Dist. LEXIS 152063 (D.D.C. 2020) (an argument that churches were restricted more than outdoor protestors "may indeed have merit").

[33] *Pcg-Sp Venture I, LLC v. Newsom*, 2020 U.S. Dist. LEXIS 137155, at *21-22 (C.D. Cal. 2020). The Lyons Declaration, which focuses on *the permit process* for capitol protests, notes that CHP typically does not take enforcement action for the many protests that occur on city streets, ¶¶ 9-10, and "typically . . . avoids taking aggressive enforcement action against unpermitted protests even on State Capitol grounds." ¶ 11.

the need to distance and wear masks even in outdoor settings. Dkt. #19 at 5:8-12. This statement came shortly after Sacramento County health officials confirmed that several COVID-19 cases were linked to protests. Pls.' Exh. 26.

One study relied upon by Watt (Decl., ¶ 45) found that high occupancy *outdoor* events that include shouting or singing (which describes many protests) pose a *medium* risk if masks are worn, and a *high* risk if masks are not worn. Pls.' Exh. 13 at 5 (Fig. 3). Even short, low occupancy outdoor events that include shouting or singing pose a medium risk if masks are not worn. *Id.* By comparison, indoor events that include shouting or singing may only pose a high risk if (1) there is prolonged contact without masks, (2) the event is high occupancy, and/or (3) ventilation is poor. *Id.* Wearing masks, coupled with either avoiding high occupancy or ensuring good ventilation, makes an indoor event that includes singing ***as safe as a typical outdoor protest***. *Id.* Additionally, a low occupancy, well-ventilated, short indoor event that includes singing, at which masks are worn, *is even safer than* a typical outdoor protest.[34] In sum, as Defendants' own evidence confirms, indoor church services that include singing or chanting can be as safe as, or safer than, outdoor protests through the implementation of safety protocols; the worship ban is unnecessary and discriminatory.

Additionally, Defendants are applying different standards to church services than they apply to other activities. When it comes to other activities, such as protests, film productions, day camps, and childcare centers, Defendants *assume the best case scenario*: safety measures and/or engineering controls will be implemented, and will sufficiently *minimize* the level of risk, even though risk cannot be fully *eliminated*.[35] By contrast, when it comes to worship services, Defendants *assume a worst case scenario*, and downplay the effectiveness of *these same protocols* by assuming that churches will not follow them,

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[34] *Id.* These findings are unsurprising considering that protests often include far more frequent (and more forceful) singing and chanting, more shouting, and more physical exertion (*e.g.*, walking while carrying a sign) than religious services. *Cf.* Ruth. Exh. 14 at 3 (individuals who are slowly walking breathe in and out more than twice as often as individuals who are sitting or standing).

[35] *See, e.g.*, Dkt. #33 at 11-12; Watt Decl., ¶¶ 33, 36, 38, 40, 42, 45; Ruth. Decl., ¶¶ 72, 76, 93. Although Defendants focus on the extent to which these settings may or may not include *group singing and chanting*, what matters is whether Defendants permit activities in these settings that *are as safe as, or are riskier than*, an indoor church service that includes singing and chanting and implements safety protocols. *See Stormans*, 586 F.3d at 1134.

and by saying that these measures do not *eliminate* the risk of spread.[36] It is patently discriminatory to impose upon churches an "eliminate *all* risk" standard while merely requiring other activities to reduce risk to a reasonable level. If, however, the rationale for the worship ban is to reduce the risk of "'super-spreader' events . . . to an acceptable level," Dkt. #33 at 1:21-25, as discussed previously, banning indoor singing and chanting is not a necessary (or recommended) means of doing so.

Further, Defendant Newsom's statement to protestors that they should "[d]o what you think is best," Dkt. #19 at 5:16-17, is not unique; numerous public health experts and public officials have argued that the societal benefits of protesting outweigh the fact that such activities involve a risk of spreading COVID-19 (which is amplified by the fact that protestors often do not observe distancing and/or mask wearing recommendations). Bhattacharya Decl., ¶¶ 29-30. Defendants cannot, however, discard "the overwhelming evidence that church attendance provides psychological benefits for attendees," *id.*, ¶ 27, and make a value judgment that, unlike the preferred activity of protesting, houses of worship must meet an impossibly high risk reduction threshold before they may engage in singing or chanting. Safety protocols can be implemented that make indoor worship services that include singing and chanting as safe as, or safer than, many other activities that are not banned. *Id.,* ¶ 26, 31; Pls.' Exh. 13 at 5.

II. The other equitable factors favor granting Plaintiffs' motion.

It is well-established that courts "do not require a strong showing of irreparable harm for constitutional injuries," and "the loss of First Amendment freedoms, for even minimal periods of time, unquestionably constitutes irreparable injury," even where the policy at issue has not yet been enforced against the plaintiffs.[37] Defendants posit that the harm to Plaintiffs' First Amendment rights is not truly irreparable because the state does not ban *outdoor* singing and chanting but, as discussed in the declarations of Thomson, Green, and Boek (filed herewith), forcing Plaintiffs to vacate their buildings in order to worship substantially burdens their constitutional rights. *See, e.g.,* Thomson Decl., ¶ 5 ("[D]ue to the recent Ferry Fire that measured 6.7 acres, the air quality has been moderate lately, releasing ash particles and making it difficult to breath[e]. Forcing the Church to meet outdoors could also cause additional breathing complications."). Further, even if a restriction is content-neutral and "leave[s] open

[36] Watt Decl., ¶¶ 38, 45, 53, 54, 57, 68 & Ruth. Decl., ¶¶ 36, 48, 56, 58, 61-63, 67, 71, 72, 76, 93.
[37] *Cuviello v. City of Vallejo*, 944 F.3d 816, 832-33 (9th Cir. 2019).

ample alternative channels of communication," *it must be narrowly tailored*;[38] that Plaintiffs are subject to an unnecessary restriction violates their rights, which necessarily inflicts irreparable harm upon them.

Additionally, as the Ninth Circuit has recently reiterated, "[i]t is *always* in the public interest to prevent the violation of a party's constitutional rights."[39] Here, Plaintiffs' likelihood of success on the merits, coupled with the fact that various other, constitutionally acceptable means exist to combat the spread of COVID-19, illustrate that an injunction should be granted.[40] The high effectiveness of many safety protocols that *Plaintiffs do not challenge* shows that Defendants' speculation that enjoining the worship ban could jeopardize public health is unfounded.[41] Similarly, Defendants' request that the State be given the opportunity to come up with a constitutionally acceptable ban on indoor singing and chanting before any injunction takes effect (Dkt. #31 at 5) should be denied; there is no need for any type of indoor singing ban, and Defendants remain free to enact and enforce constitutionally sound safety requirements.

Conclusion

As scientific understanding improves, the government must adjust its pandemic response accordingly.[42] As recognized by the CDC and WHO, banning indoor singing and chanting is unnecessary. Further, Defendants allow other activities that pose a similar, or greater, level of risk. An injunction will not harm the public, as other safety measures can mitigate any risks. In California's words, the existence of other "strategies that [Defendants] can pursue" shows that the worship ban is "unnecessary to advance the State's asserted interest in protecting the public health." *See* Br. of N.Y., Cal., et al. at 4-5, 8, 19.

[38] *Butler*, 2020 U.S. Dist. LEXIS 167544, at *44-47; *Ramsek*, 2020 U.S. Dist. LEXIS 110668, at *27-30.
[39] *Index News. LLC v. U.S. Marsh. Serv.*, 2020 U.S. App. LEXIS 32103, at *44 (9th Cir. 2020) (emphasis added) (declining to stay injunction that protected First Amendment rights).
[40] *Denver Bible Church*, 2020 U.S. Dist. LEXIS 195607, at *53-55 ("[t]he public has an interest in preserving constitutional rights," and a violation of such rights imposes irreparable harm; other, permissible means of fighting the pandemic can be utilized).
[41] That indoor services are only permitted in counties where there is *not* currently a high risk supports Plaintiffs' arguments, as this further shows that singing and chanting can safely occur wherever, and whenever, indoor services are permitted. Ruth. Decl., ¶ 53 & Watt Decl., ¶ 61 ("public health measures may be relaxed to allow more activities" "in a county where there is a low prevalence of infection").
[42] Dkt. #33 at 3, 15; Watt Decl., ¶¶ 19, 60; *cf.* Ruth. Decl., ¶¶ 17, 89.

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Plaintiffs' Exhibit 1

Plaintiffs' Annotated Bibliography

CDC and WHO publications, research studies, and other scholarly sources

Adam, D.C., et al., *Clustering and superspreading potential of SARS-CoV-2 infections in Hong Kong*, Nat. Med. (Sept. 17, 2020), https://doi.org/10.1038/s41591-020-1092-0 [**Ruth. Exh. 7**] (study of super-spreader events concluded that various safety protocols, such as physical distancing, mask usage, and attendance limits, can reduce the transmission of SARS-CoV-2 in social settings).

Alsved, M., et al., *Exhaled respiratory particles during singing and talking*, Aerosol Science and Technology, Sept. 17, 2020, https://doi.org/10.1080/02786826.2020.1812502 [**Ruth. Exh. 25**; Watt Decl., ¶ 54] (wearing masks is a highly effective means of significantly reducing the emission of aerosol particles and almost eliminating droplets during singing; "SARS-CoV-2 could not be detected in the air samples collected while confirmed Covid-19 patients were singing and talking"; wearing masks, distancing, ventilation, etc. can eliminate risks associated with group singing).

Asadi, S., et al., *Aerosol emission and superemission during human speech increase with voice loudness*, Sci. Rep. 9, 2348 (2019), https://doi.org/10.1038/s41598-019-38808-z [Watt Decl., ¶ 45] (concluding that "[t]he particle emission rate during speech is linearly correlated with the amplitude (loudness) of vocalization"; the article did not examine the extent to which wearing a mask, distancing, or taking other protective measures eliminates the spread of particles from speaking or singing).

Bae, S., *Epidemiological Characteristics of COVID-19 Outbreak at Fitness Centers in Cheonan, Korea*, J. Korean Med. Sci., Aug. 2020; 35(31):e288, https://jkms.org/DOIx.php?id=10.3346/jkms.2020.35.e288 [**Pls.' Exh. 24**] (not wearing masks, and not distancing, contributed to fitness center outbreaks; those practices reduce the risk of outbreaks).

Brooks, John T., et al., *Universal Masking to Prevent SARS-CoV-2 Transmission—The Time is Now*, JAMA, Aug. 18, 2020, https://jamanetwork.com/journals/jama/fullarticle/2768532 [**Pls.' Exh. 8**; Watt Decl., ¶ 51] (noting that there is "compelling evidence" that wearing masks is "a highly effective low-tech solution" to minimize the spread of COVID-19).

Buonanno, G., et al., *Quantitative assessment of the risk of airborne transmission of SARS-CoV-2 infection: Prospective and retrospective applications*, Environ Int'l (2020) Sep. 06; 145:106112, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7474922/ [**Ruth. Exh. 14**] (a study of maskless emission rates of various activities, including singing, noted that ventilation and crowd size are important factors affecting mitigation of risk; "for all the scenarios investigated, the ventilation conditions strongly influence the risk (or the exposure time) of the exposed subject"; the study did not examine (or question) the effectiveness of wearing masks; the study also noted that that individuals who are slowly walking tend to breathe in and out more than twice as often as individuals who are just sitting or standing).

CDC, *Clinical Questions about COVID-19: Questions and Answers*, Oct. 5, 2020, https://www.cdc.gov/coronavirus/2019-ncov/hcp/faq.html [**Pls.' Exh. 3**; Watt Decl., ¶ 40] ("[T]hose at greatest risk of infection are persons who have had prolonged, unprotected close contact (*i.e.*, within 6 feet for 15 minutes or longer) with a patient with confirmed SARS-CoV-2 infection. . . . All persons can

reduce the risk to themselves and others by wearing a mask, practicing physical distancing, washing their hands often, and taking other prevention measures.").

CDC, *Considerations for Wearing Masks; Help Slow the Spread of COVID-19*, Aug. 2020, https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover-guidance.html [**Watt Exh. 20**] (discussing the effectiveness of wearing masks "in public settings and when around people who don't live in your household, especially when other social distancing measures are difficult to maintain").

CDC, *How COVID-19 Spreads*, Oct. 5, 2020, https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html [**Pls.' Exh. 2**; Watt Decl., ¶ 29] (noting that wearing masks, physical distancing, proper ventilation, and limiting crowd size are effective means of preventing the spread of COVID-19 in indoor gatherings).

CDC, *How to Protect Yourself and Others*, July 31, 2020, https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html [**Watt Exh. 17**] (noting that, since "[t]he virus is thought to spread mainly from person-to-person . . . [b]etween people who are in close contact with one another (within about 6 feet) . . . [t]hrough respiratory droplets," physical distancing, coupled with wearing masks and washing hands regularly, is an effective means of limiting the spread).

CDC, *Scientific Brief: SARS-CoV-2 and Potential Airborne Transmission*, Oct. 5, 2020, https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-sars-cov-2.html [**Pls.' Exh. 4**] (noting that potential airborne transmission is exceedingly unlikely and rare, and reiterating that wearing masks, social distancing, proper ventilation, avoiding overcrowding, proper hand hygiene, and surface cleaning and disinfection are effective means of preventing the spread of COVID-19).

CDC Newsroom, *CDC calls on Americans to wear masks to prevent COVID-19 spread*, July 14, 2020, https://www.cdc.gov/media/releases/2020/p0714-americans-to-wear-masks.html [**Watt Exh. 21; Ruth. Exh. 24**] (noting that "wearing a mask prevented the spread of infection" from two symptomatic hair stylists to any of their numerous clients).

CDPH, *California Public Health Officials Release Guidance Requiring Californians to Wear Face Coverings in Most Settings Outside the Home*, https://www.cdph.ca.gov/Programs/OPA/Pages/NR20-128.aspx [**Watt Exh. 24**] ("'Science shows that face coverings and masks work,' said Governor Gavin Newsom. . . . 'As Californians venture into our communities more, wearing face coverings is another important way we can help protect one another,' said Dr. Sonia Angell, State Public Health Officer and Director of the California Department of Public Health. 'Combined with physical distancing and frequent hand washing, wearing cloth face coverings when we are with others outside of our household will reduce the spread of COVID-19.'").

CDPH, *County Data Monitoring*, July 21, 2020 [**Watt Exh. 10**] (reasons for Riverside County's elevated level of COVID-19 cases included "potential transmission at public protests with large numbers of people in close proximity without face coverings"; many counties cited a failure to wear masks and/or physically distance as drivers of spread at community gatherings (and in other settings), and stated that encouraging the public to distance and wear masks was one means of stopping the spread).

CDPH, *Guidance for Private Gatherings* [**Eisenberg Exh. 13 at 3**] (encouraging, but not requiring, a variety of safety protocols for outdoor singing, chanting, and shouting, such as wearing masks, maintaining physical distancing beyond 6 feet, and using a quiet volume level).

CDPH, *Guidance for the Use of Face Coverings* [**Watt Exh. 23**] ("The use of face coverings by everyone can limit the release of infected droplets when talking, coughing, and/or sneezing, as well as reinforce physical distancing. . . . Their primary role is to reduce the release of infectious particles into the air when someone speaks, coughs, or sneezes.").

CDPH, *Guidance on Closure of Sectors in Response to COVID-19*, July 1, 2020 [**Watt Exh. 25**] (finding that certain types of indoor activities (*e.g.*, bars, restaurants) posed a "high risk of transmission due to a number of features" such as being places where regular physical movement makes physical distancing difficult, and individuals tend to not wear face coverings for lengthy periods of time; poor ventilation may be an additional risk factor at these locations).

Chu, Derek, et al., *Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis*, The Lancet (June 1, 2020) [**Watt Exh. 18**] (the use of face masks is "associated with a large reduction in risk of infection"; physical distancing of at least 3.3 feet (one meter) "was associated with a much lower risk of infection. . . . [A] strong association was found of proximity of the exposed individual with the risk of infection").

Cowling, B.J., et al., *Impact assessment of non-pharmaceutical interventions against coronavirus disease 2019 and influenza in Hong Kong: an observational study*, Lancet Public Health 5, e279–e288 (2020), https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(20)30090-6/fulltext [**Pls.' Exh. 17**] (concluding that "COVID-19 transmission can be contained with a combination of testing and isolating cases, plus tracing and quarantining their close contacts, along with some degree of social distancing. . . .").

Fisher, Kiva A., et al., *Factors Associated with Cloth Face Coverings Use during the COVID-19 Pandemic — United States, April and May 2020*, CDC Morbidity and Mortality Weekly Report (Jul. 17, 2020), https://www.cdc.gov/mmwr/volumes/69/wr/mm6928e3.htm [Watt Decl., ¶ 51] (studying the reasons why people decide not to wear masks, and making recommendations for public messaging to promote positive attitudes toward wearing masks in light of their effectiveness in stopping the spread of COVID-19).

Ghandhi, M., et al., *Asymptomatic Transmission, the Achilles Heel of Current Strategies to Control Covid-19*, N. Eng. J. of Med. 382:2158 (May 28, 2020), https://www.nejm.org/doi/full/10.1056/nejme2009758 [**Watt Exh. 7**] (various factors, including "the eventual need to relax current social distancing practices," "support the case for the general public to use face masks when in crowded outdoor or indoor spaces").

Gandhi, Monica & Rutherford, George W., *Facial Masking for Covid-19 – Potential for "Variolation" as We Await a Vaccine*, N. Eng. J. of Med. (Sept. 8, 2020), https://www.nejm.org/doi/full/10.1056/NEJMp2026913 [**Pls.' Exh. 9**; Ruth. Decl., ¶ 11] (noting that "there is a strong relationship between public masking and pandemic control" since "facial masking can . . . protect the wearer from becoming infected, by blocking viral particles from entering the nose and

mouth"; it appears likely that masks also "help reduce the severity of disease and ensure that a greater proportion of new infections are asymptomatic").

Gregson, et al., *Comparing the Respirable Aerosol Concentrations and Particle Size Distributions Generated by Singing, Speaking and Breathing*, doi.org/10.26434/chemrxiv.12789221.v1 [**Pls.' Exh. 21**] (neither quiet singing nor quiet speaking produces significantly more aerosols than breathing; poor ventilation—not anything particularly risky about singing or speaking—was a key factor in certain super-spreader events; "for indoor events measures to ensure adequate ventilation may be more important than restricting a specific activity").

Goyal, A., et al., *Wrong person, place and time: viral load and contact network structure predict SARS-CoV-2 transmission and super-spreading events*, medRxiv, Aug. 7, 2020 [Preprint], https://www.medrxiv.org/content/10.1101/2020.08.07.20169920v1.full.pdf [**Ruth. Exh. 4**] (physical distancing is an effective strategy associated with a decrease in population spread (and the number of individuals who become super-spreaders) since "super-spreading events are dependent on a large number of exposure contacts during the relatively narrow 1-2 days window during which a ~25% subset of infected people is shedding at extremely high levels. . . ."; the study also stated that, "[w]here large numbers of exposure contacts are unavoidable, mandatory masking policies . . . should be considered").

Hamner, L., et al., *High SARS-CoV-2 attack rate following exposure at a choir practice – Skagit County, Washington, March 2020*, 69 Morbidity & Mortality Weekly Rept. 2020 606-10, https://www.cdc.gov/mmwr/volumes/69/wr/mm6919e6.htm [**Watt Exh. 13 & Ruth. Exh. 19**] (CDC study of the Skagit County, Washington choir practice super-spreader event noted that attendees "had an intense and prolonged exposure" that included contact with a *symptomatic* contagious participant, "singing while sitting 6–10 inches from one another," "sharing snacks, and stacking chairs at the end of the practice"; the study *did not* recommend the banning of indoor singing, but rather noted the importance of safety measures such as social distancing, mask wearing, and excluding symptomatic individuals).

Hendrix, M. Joshua, *Absence of Apparent Transmission of SARS-CoV-2 from Two Stylists After Exposure at a Hair Salon with a Universal Face Covering Policy – Springfield, Missouri, May 2020*, Morbidity and Mortality Weekly Report, July 17, 2020, https://www.cdc.gov/mmwr/volumes/69/wr/mm6928e2.htm [**Pls.' Exh. 7**; Watt Decl., ¶ 51] (the wearing of masks by two symptomatic hair stylists, and 98% of their 139 clients, prevented the spread of COVID-19 to any of the clients).

Imai, Natsuko, et al., *Report 3: Transmissibility of 2019-n-CoV*, WHO Collaborating Centre for Infectious Disease Modelling (Jan. 25, 2020) [**Watt Exh. 3**] ("We note the large body of evidence that suggests that the reproduction number for SARS changed considerably when populations became fully aware of the threat.").

Inglesby, Thomas V., *Public Health Measures and the Reproduction Number of SARS-CoV-2*, JAMA Insights (May 1, 2020), https://jamanetwork.com/journals/jama/fullarticle/2765665 [**Watt Exh. 4**] (in light of "the severe economic and societal consequences" of overly restrictive limitations on activities, government leaders should rely on the CDC's findings, and studies concerning "the need for and effectiveness of social distancing measures," to assess whether specific preventative measures are necessary).

James, Allison, et al., *High COVID-19 Attack Rate Among Attendees at Events at a Church — Arkansas, March 2020*, https://www.cdc.gov/mmwr/volumes/69/wr/mm6920e2.htm [**Watt Exh. 14; Ruth. Exh. 20**] (study noted that two symptomatic individuals attended events hosted by an Arkansas church, which included a buffet-style meal as well as "brief close contact among nearly all" attendees; the study concluded that churches can prevent COVID-19 by "implement[ing] the U.S. Government's guidelines for modifying activities"; suspension of all singing in indoor religious services was not discussed or recommended).

Jones, Nicholas, et al., *Two metres or one: what is the evidence for physical distancing in covid-19?*, The BMJ, Aug. 25, 2020, https://www.bmj.com/content/370/bmj.m3223 [**Pls.' Exh. 13**; Watt Decl., ¶ 45] (wearing masks, avoiding high occupancy, and ensuring adequate ventilation can mitigate any risks posed by speaking, singing, or shouting in both outdoor and indoor events).

Kaltenboeck, Anna & Rajkumar, S. Vincent, *The Case for Masks: Health Care Workers Can Benefit Too*, Mayo Clinic Proc., https://www.mayoclinicproceedings.org/article/S0025-6196(20)30383-9/pdf [**Pls.' Exh. 11**] ("[M]asks drastically reduce the number of droplets that make it beyond the wearer's mask and into their surroundings" and also minimize the inward flow of particles).

Kar-Purkayastha, I., et al., *The importance of school and social activities in the transmission of influenza A (H1N1)v: England, April-June 2009*, Euro. Surveill. 2009; 14:19311, https://www.eurosurveillance.org/content/10.2807/ese.14.33.19311-en [**Ruth. Exh. 22**] (H1N1 spread among individuals associated with three schools through "cumulative exposure of several hours duration to a symptomatic case"; the H1N1 attack rate was noticeably *lower* within a choir setting than it was at a party and in the classroom setting; "closeness of contact" was a significant factor; "[f]urther work is warranted looking at the usefulness of social distancing measures in each of these settings (school, social groups, transport) in interrupting transmission of influenza A(H1N1)v.").

Konda, A., et al., *Aerosol filtration efficiency of common fabrics used in respiratory cloth masks*, ACS Nano 2020, 14, 5, 6339–6347, https://doi.org/10.1021/acsnano.0c03252 [**Pls.' Exh. 15**] (noting that "[t]he use of physical barriers such as respiratory masks can be highly effective in mitigating [aerosol] spread via respiratory droplets," and concluding that masks "can potentially provide significant protection against the transmission of aerosol particles").

Lai, A.C., et al., *Effectiveness of Facemasks to Reduce Exposure Hazards for Airborne Infections Among General Populations*, J. R. Soc., Interface 2012, 9, 938–948, https://doi.org/10.1098/rsif.2011.0537 [**Pls.' Exh. 16**] (study that measured the protection that masks provide against respiratory emissions found that increasing the distance between individuals significantly enhances the degree of protection afforded by masks).

Leclerc, Quentin J., et al., *What settings have been linked to SARS-CoV-2 transmission clusters?*, Wellcome Open Research, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7327724/ [**Ruth. Exh. 12**] (the vast majority of outbreak clusters occurred in indoor settings in which few, or no, preventative measures were being taken; individuals were often in close proximity, with physical contact (hugging, etc.) in crowded areas).

Lednicky, John A., et al., *Viable SARS-CoV-2 in the air of a hospital room with COVID-19 patients*, https://www.medrxiv.org/content/10.1101/2020.08.03.20167395v1 [Watt Decl., ¶ 45] (a "low," "small" amount of virus was present in air samples collected within a few meters of COVID-19 patients within a hospital's designated COVID-19 ward; no information was provided on whether the viral load was sufficient to infect other people, or whether the patients were wearing masks during the study, nor was any information provided on the extent to which wearing a mask would eliminate any risk of infection from the small virus amounts).

Leung, N., et al., *Respiratory Virus Shedding in Exhaled Breath and Efficacy of Face Masks*, Nat. Med. 2020, https://doi.org/10.1038/s41591-020-0843-2 [**Pls.' Exh. 14**] (wearing surgical face masks significantly reduced the detection of coronavirus RNA in aerosol samples, and can help prevent transmission of coronaviruses).

Li, Y., et al., *Role of ventilation in airborne transmission of infectious agents in the built environment – a multidisciplinary systematic review*, Indoor Air. 2007 Feb.; 17(1):2-18, https://www.researchgate.net/publication/6547407_Role_of_ventilation_in_airborne_transmission_of_infectious_agents_in_the_built_environment_-_A_multidisciplinary_systematic_review [**Pls.' Exh. 20**] (finding an association between poor indoor ventilation in buildings and the airborne transmission of certain diseases).

Lu, J., et al., *COVID-19 Outbreak Associated with Air Conditioning in Restaurant, Guangzhou, China, 2020*, Apr. 2, 2020, Emerg. Infect. Dis. 2020, 26(7):1628-1631, https://wwwnc.cdc.gov/eid/article/26/7/20-0764_article [**Ruth. Exh. 3**] (individuals who sat at neighboring tables at an indoor restaurant that had only one meter of space between them contracted COVID-19 from droplet transmission that was aided by a nearby air conditioning outlet/inlet; the article concluded that that, "[t]o prevent spread of COVID-19 in restaurants, we recommend strengthening temperature-monitoring surveillance, increasing the distance between tables, and improving ventilation").

Lu, J. & Yang, Z., *Letter re: COVID-19 Outbreak Associated with Air Conditioning in Restaurant, Guangzhou, China, 2020*, https://wwwnc.cdc.gov/eid/article/26/11/20-3774_article [**Pls.' Exh. 23**] ("We agree that virus transmission in this outbreak could be explained by droplet transmission and the possibility that persons move around, touch surfaces, go to the restroom, or engage in other close contact. . . . We excluded the possibility of aerosol transmission. . . . [I]n our study, none of the 62 persons at the other 12 tables were infected.").

Mangura, Bonita T., et al., *Mycobacterium tuberculosis miniepidemic in a church gospel choir*, Chest 1998; 113:234-37, https://journal.chestnet.org/article/S0012-3692(16)39577-0/pdf [**Ruth. Exh. 21**] ("intense exposure time," "local proximity," singing, the location of a ventilation outlet, and "[s]ome limited extra-church activity between choir members" "may have contributed" to the transmission of five cases of TB among a gospel choir).

Marks, J.S., et al., *Saturday night fever: a common-source outbreak of rubella among adults in Hawaii*, Am. J. Epidemiol (Oct. 1981); 114(4):574-83 [**Ruth. Exh. 15**] (numerous rubella infections were likely connected to a highly-packed discotheque, which had a maximum capacity of 300 under the fire code,

but often had 800 more people at one time; the article suspected that a symptomatic singer was likely responsible for some of the infections).

Mastorides, S.M., *The detection of airborne Mycobacterium tuberculosis using micropore membrane air sampling and polymerase chain reaction*, Chest (Jan. 1999); 115(1):19-25 [**Ruth. Exh. 16**] (a study concluded that a certain air sampling technique was useful for the study of tuberculosis, and noted the importance of good ventilation; the study did not mention singing other than noting that some 1960's studies found that "coughing, talking, or even singing" can contribute to the spread of TB).

Miller, Shelly L., et al., *Transmission of SARS-CoV-2 by inhalation of respiratory aerosol in the Skagit Valley Chorale superspreading event*, Indoor Air, Sept. 15, 2020, https://onlinelibrary.wiley.com/doi/10.1111/ina.12751 [**Pls.' Exh. 25**] (study of the Skagit County, Washington choir practice super-spreader event concluded that singing can safely occur indoors with the implementation of protocols such as wearing masks, proper ventilation, and capping attendance).

Morawska, L., *It is Time to Address Airborne Transmission of COVID-19*, Clin. Infect. Dis., July 2020, https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa939/5867798 [**Pls.' Exh. 18**] (noting that the potential risk of airborne COVID-19 transmission can be mitigated in indoor environments through proper ventilation / air filtration and avoiding overcrowding).

Nishiura, H., et al., *Closed environments facilitate secondary transmission of coronavirus disease 2019 (COVID-19)*, Apr. 16, 2020 [Preprint], https://www.medrxiv.org/content/10.1101/2020.02.28.20029272v2 [**Watt Exh. 11; Ruth. Exh. 13**] (a study of super-spreader events concluded that "[i]t is plausible that closed environments contribute to secondary transmission of COVID-19 and promote superspreading events"; the study did not explore the impact of wearing masks or taking other precautionary measures).

Qian, Hua, et al., *Indoor transmission of SARS-CoV-2*, Apr. 7, 2020 [preprint], https://www.medrxiv.org/content/10.1101/2020.04.04.20053058v1 [**Watt Exh. 12**] (noting, in a study of early outbreaks in China, that "[t]he association between crowding and infection" is well documented).

Sacks, J.J., et al., *Epidemiology of a tuberculosis outbreak in a South Carolina junior high school*, Am. J. Public Health (Apr. 1985); 75(4):361-65, https://ajph.aphapublications.org/doi/pdfplus/10.2105/AJPH.75.4.361 [**Ruth. Exh. 17**] (one student, who had a chronic cough among various other symptoms, was responsible for spreading tuberculosis to over 200 students, teachers, bus passengers, and church choir members over the course of two months; the school had no central ventilation system, and the study found that some classrooms had higher infection rates than others, and noted that "[c]losed, poorly ventilated spaces" are more likely to spread tuberculosis; although the study briefly mentioned "the possibility" that singing might have increased the risk of spread within the choir setting, there was no data to support this since all but three of the choir members also had contact with the infected student outside of the choir).

Szablewski, Christine M., et al., *SARS-CoV-2 Transmission and Infection Among Attendees of an Overnight Camp - Georgia, June 2020*, MMWR (Aug. 7, 2020); 69(31):1023-25, https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6931e1-H.pdf [**Ruth. Exh. 18**] (COVID-19 spread at a summer camp that took place over the course of several days and nights; on average, about 480

children and staff members each shared their cabins with fourteen other people; the camp did not require campers to wear masks or require the opening of windows and doors for increased ventilation in buildings, and it was unclear whether physical distancing was practiced; the article suggested that singing, cheering, and spending extensive time in crowded, poorly ventilated cabins were likely among the "variety of indoor and outdoor activities" that contributed to the spread, but the article did not recommend that singing or shouting should be limited; rather, the article concluded that "[p]hysical distancing and consistent and correct use of cloth masks should be emphasized as important strategies for mitigating transmission in congregate settings").

Tang, S., et al., *Aerosol transmission of SARS-CoV-2? Evidence, prevention and control*, Environ. Int. 144, Aug. 7, 2020, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7413047/pdf/main.pdf [**Pls.' Exh. 19**] ("In general, ventilation will clear . . . viral aerosols fairly quickly" in indoor settings).

van der Sande, M., et al., *Professional and Home-Made Face Masks Reduce Exposure to Respiratory Infections Among the General Population*, PLoS One 2008; 3(7):e2618, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2440799/ [**Pls.' Exh. 10**] (a variety of types of masks, including homemade masks, can provide "significant protection"; masks provided more protection against inward flow of particles than outward flow).

Washko, Rita, et al., *Tuberculosis transmission in a high school choir*, Journal of School Health, Vol. 68, Issue 6, Aug. 1998 [Ruth. Decl., ¶ 60] (a student with TB was symptomatic for six months while attending school and infected many other individuals, and choir members were infected at a higher rate than students who were not in the choir).

World Health Organization, *Key planning recommendations for mass gatherings in the context of the current COVID-19 outbreak: interim guidance*, May 29, 2020, https://www.who.int/publications/i/item/10665-332235 [**Pls.' Exh. 5**] (emphasizing that religious events "have important implications on the psychological well-being of large number of individuals," and noting that precautionary measures, such as limiting capacity, using hand sanitizer and disinfectants, utilizing physical distancing, wearing masks, etc. are effective means of preventing the spread of COVID-19).

World Health Organization, *Q&A: How is COVID-19 transmitted?*, July 9, 2020 [**Watt Exh. 5**] (noting that, although "[p]eople who are in close contact (within 1 metre) with an infected person can catch COVID-19" through droplets released "when an infected person coughs, sneezes, speaks or sings," measures such as distancing, wearing a mask, good ventilation, disinfection, and cleaning hands are effective ways to limit the spread).

World Health Organization, *Transmission of SARS-CoV-2: implications for infection prevention precautions: Scientific Brief*, https://www.who.int/news-room/commentaries/detail/transmission-of-sars-cov-2-implications-for-infection-prevention-precautions [**Watt Exh. 6**] (noting that, in various super-spreader events, exposed individuals typically "had close physical contact, shared meals, or were in enclosed spaces for approximately one hour or more with symptomatic cases," and "the close contact environments of these clusters may have facilitated transmission . . . especially if hand hygiene was not performed and masks were not used when physical distancing was not maintained").

World Health Organization, *WHO mass gathering COVID-19 risk assessment tool – Religious events*, July 10, 2020, https://www.who.int/publications/i/item/10665-333186 [**Pls.' Exh. 6**] (WHO's comprehensive risk assessment tool concerning religious events explains how such events can occur safely through the use of precautionary measures, such as distancing, hand sanitizing, and wearing masks; this document did not mention singing or chanting as a risk factor, or suggest that those activities be curtailed). [Note: WHO's risk assessment tool is an interactive Excel file with formulas and several tabs, so it is best reviewed/utilized by downloading the Excel file.]

Anecdotes, news articles, and other non-scholarly sources

Alliance of Motion Picture and Television Producers, *Sideletter* [**Bell Exh. 3** at 58] (although "the possibility of additional COVID-19 health and safety protocols for group voiceover/ADR/looping and singing" will be discussed, such activities *are permitted* under the return to work agreement).

Alliance of Motion Picture and Television Producers, *White Paper* [**Bell Exh. 1** at 7, 15] (singing and chanting were not mentioned as activities to be minimized; noting that masks "reduce the transfer of saliva and respiratory droplets to people close to the wearer," and physical distancing is beneficial because "[l]imiting face-to-face contact with others is the best way to reduce the spread of COVID-19").

Baker, Sinéad, *An infamous Washington choir practice led to 53 COVID-19 cases and 2 deaths — and could have been down to a "super-emitter" in the choir*, Business Insider, May 13, 2020 [Dkt. #33 at 19-20] (the CDC said that the Washington choir super-spreader event "underscores the importance of physical distancing," wearing masks, etc., and Skagit County Public Health said "[t]he results of this investigation illustrate the critical importance of physical distancing").

Beachum, Lateshia, *Two churches reclose after faith leaders and congregants get coronavirus*, Washington Post, May 19, 2020 [Dkt. #33 at 19-20] (two churches in Georgia and Texas closed as a precautionary measure after some individuals in attendance at services tested positive; there were no indications whether the church services contributed to any spread of the virus, and the article did not provide details concerning whether the churches imposed distancing and/or mask wearing requirements).

Blair, Leonardo, *Ga. church closes two weeks after reopening as families come down with coronavirus*, Christian Post, May 18, 2020 [Dkt. #33 at 19-20] (Georgia church closed as a precautionary measure after members of several families tested positive; there was no indication whether the church services contributed to any spread of the virus, whether masks were worn at services, or whether the church was well-ventilated).

Burns, Ryan, *A Redding Megachurch Leader Came to Humboldt and Flouted Mask Rules; Her Ministry is Now the Source of a Major COVID Outbreak*, Local Coast Outpost, Oct. 13, 2020 [Dkt. #33 at 19-20] (church led by vocal opponents of wearing masks, which was involved with a "tightly packed, mask-free" event that was "in defiance of state and local health regulations," had an outbreak).

Chabria, Anita, et al., *Pentecostal church in Sacramento linked to dozens of coronavirus cases*, L.A. Times, Apr. 2, 2020 [Dkt. #33 at 19-20] (Sacramento County health director stated "we have to enforce

social distancing" in light of church events that included shaking hands; there was no evidence that the church at issue implemented distancing and/or mask requirements).
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COVID-19 Return-to-Work Agreement, Sept. 21, 2020 [**Bell Exh. 3** at 36-37, 45] (exempting individuals who use voiceover and recording booths by themselves for under fifteen minutes from COVID-19 testing; "[l]imiting face-to-face contact with others is the best way to reduce the spread of COVID-19. Cast and crew must practice physical distancing whenever possible.").

Daniels, Joseph, *4 coronavirus cases tied to police reform protests, Sacramento County officials say*, June 25, 2020, https://www.abc10.com/article/news/local/sacramento/coronavirus-police-reform-protests/103-d82d506a-2dbb-451d-ac45-023cb5ab0a01 [**Pls.' Exh. 26**] (Sacramento County health officials confirmed that several individual cases were apparently linked to political protests, and "the only concern that health officials had leading up to the protests is whether participants were going to maintain social distance, wear face coverings, and practice good hygiene").

Lund University, *Could singing spread COVID-19?*, Sept. 7, 2020, https://medicalxpress.com/news/2020-09-covid--1.html [**Pls.' Exh. 12**] ("Singing doesn't need to be silenced . . . but at the moment the wisest thing is to sing with social distancing in place."; group singing can occur safely, both indoors and outdoors, "with social distancing, good hygiene and good ventilation, which reduces the concentration of aerosol particles in the air. Face masks can also make a difference.").

Monahan, Rachel, *Oregon Reports 278 New COVID-19 Cases, Another Record, as Outbreak at Pentecostal Church Ravages Union County*, Willamette Week, June 16, 2020 [Dkt. #33 at 19-20] (outbreak connected to Oregon church services in which "[p]articipants were close enough to rub shoulders and no one was wearing face coverings").

Moon, Sarah & Silverman, Hollie, *The pastor of a northern California church that held a Mother's Day livestream service has tested positive for coronavirus*, CNN, May 19, 2020 [Dkt. #33 at 19-20] (article notes that a few individuals at two different California churches tested positive; no information was provided about the extent to which safety protocols were implemented or ignored).

Parker, Molly, *As more places begin to reopen Friday, Jackson County experiences COVID-19 spike*, Southern Illinoisan, May 28, 2020 [Dkt. #33 at 19-20] (discussing an outbreak at a church holding services "against public health guidance"; no details were provided about what protocols, if any, were followed at the services).

Porter, Steven, *COVID-19 spread at Maine wedding now linked to 143 cases, one death, outbreak at jail*, USA Today, Sept. 3, 2020 [Dkt. #33 at 19-20] (no information was provided about what, if any, safety protocols were utilized at a Maine wedding linked to an outbreak).

Sanchez, Tatiana, *Churchgoers told to isolate after exposure*, San Francisco Chronicle, May 18, 2020 [Dkt. #33 at 19-20] (one person tested positive after attending a Butte County church service held in violation of shelter-in-place orders; no information was provided about what, if any, safety protocols were utilized).

Shin, Youjin, et al., *How a South Korean Church Helped Fuel the Spread of the Coronavirus, Washington Post*, Mar. 25, 2020 [**Watt Exh. 16**] (noting that numerous positive tests were connected to the Shincheonji Church in Daegu, South Korea; as noted in Watt Exh. 15 (Yoon & Martin), this church had 1,000 individuals embrace repeatedly while crammed shoulder-to-shoulder in a windowless basement with at least one symptomatic individual).

The Korean Clusters, Reuters (Mar. 20, 2020) [**Ruth. Exh. 23**] (discussing spread at Shincheonji Church in Daegu, South Korea; as noted in Watt Exh. 15 (Yoon & Martin), this church had 1,000 individuals embrace repeatedly while crammed shoulder-to-shoulder in a windowless basement with at least one symptomatic individual).

The Safe Way Forward: A Joint Report [**Bell Exh. 2** at 3] (singing and chanting were not mentioned as activities to be minimized; noting that "scientists have learned" that outbreaks connected to musical events and community gatherings "could have been prevented by planning with best practices").

University of Bristol, *Singing is no more risky than talking finds new COVID-19 study*, Aug. 20, 2020, http://www.bristol.ac.uk/news/2020/august/perfomsing-study.html [**Pls.' Exh. 22**] (singing can occur indoors safely "by ensuring that spaces are appropriately ventilated").

Wigglesworth, Alex, et al., *As a few churches challenge stay-at-home order, fears of more coronavirus outbreaks*, L.A. Times, May 18, 2020 [Dkt. #33 at 19-20] (discussing various COVID-19 cases purportedly connected to church attendance in California without discussing what safety protocols, if any, were utilized during those events).

Yoon, Dasl & Martin, Timothy W., *Why a South Korean Church Was the Perfect Petri Dish for Coronavirus*, Wall Street Journal, Mar. 2, 2020 [**Watt Exh. 15**] (the Shincheonji Church in Daegu, South Korea held services in "a basement worship hall with no windows or furniture" during which 1,000 individuals, including a woman with a sore throat and a fever, were "crammed shoulder-to-shoulder" and "embraced others repeatedly").