

FOR PUBLICATION

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

H. RAY LAHR,
Plaintiff-Cross-Appellant/Appellee,
v.
NATIONAL TRANSPORTATION SAFETY
BOARD; CENTRAL INTELLIGENCE
AGENCY; NATIONAL SECURITY
AGENCY,
*Defendants/Cross-Appellees-
Appellants.*

Nos. 06-56717, 06-
56732, 07-55709
D.C. No.
CV-03-08023-AHM
OPINION

Appeal from the United States District Court
for the Central District of California
A. Howard Matz, District Judge, Presiding

Argued and Submitted
August 8, 2008—Pasadena, California

Filed June 22, 2009

Before: Roger J. Miner,* Kim McLane Wardlaw and
Marsha S. Berzon, Circuit Judges.

Opinion by Judge Berzon

*The Honorable Roger J. Miner, Senior United States Circuit Judge for the Second Circuit, sitting by designation.

COUNSEL

John H. Clarke, Washington, D.C., for plaintiff-cross-appellant/appellee Ray Lahr.

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ton, D.C., for defendants-appellants/cross-appellees National Transportation Safety Board, et al.

OPINION

BERZON, Circuit Judge:

Trans World Airlines Flight 800 (“TWA Flight 800”) exploded in midair off the coast of Long Island on July 17, 1996, killing all 230 people aboard. The cause of this dramatic and tragic event remains, for some, in dispute, and that dispute underlies this lawsuit brought under the Freedom of Information Act (“FOIA”), 5 U.S.C. § 552.

The government, after an extensive investigation, concluded that the accident was caused by an explosion in one of the aircraft’s fuel tanks, initiated by an electrical short circuit. Ray Lahr is, to put it mildly, not convinced. He maintains that the government has engaged in a massive cover-up of the real cause, which he suspects is most likely a strike by a missile launched offshore by the U.S. Navy. In an attempt to prove his theory, Lahr initiated more than two hundred FOIA requests for documents and data to federal agencies involved in the investigation. When the agencies gave him only some of the information he asked for, Lahr filed this lawsuit. On summary judgment, the district court ordered the government to release some documents in compliance with his requests but authorized it to withhold others, as exempt from disclosure pursuant to several of FOIA’s enumerated exemptions. Lahr appeals several of the district court’s rulings authorizing nondisclosure; the government appeals only one of the district court’s rulings adverse to it. We affirm in part, reverse in part, and remand.

I. BACKGROUND

A. The Crash and the Investigation

At approximately 8:19 p.m. on July 17, 1996, TWA Flight 800 left John F. Kennedy Airport in New York en route to Charles de Gaulle International Airport in Paris. Twelve minutes after departure, the Boeing 747 aircraft crashed into the Atlantic Ocean. Everyone on board died. According to the government, many eyewitnesses reported seeing a “streak of light, resembling a flare, moving upward in the sky to the point where a large fireball appeared.” The eyewitnesses then saw the fireball split into two as it descended toward the water.

The National Transportation Safety Board (“NTSB”) launched a broad-based civil investigation into the cause of the crash.¹ As part of its efforts, the NTSB appointed several entities to assist in the investigation, including the Boeing Company, the Air Line Pilots Association, and TWA. Initial examination of the eyewitness reports and information from the cockpit voice and data recorders led the NTSB to narrow the possible causes to three: structural failure of the airplane; a bomb or missile; and an explosion in the fuel tank. The possibility that a bomb or missile destroyed TWA Flight 800 led the FBI to launch a criminal investigation into the incident. As part of its investigation, the FBI asked Central Intelligence Agency (“CIA”) weapons analysts for assistance in determining what the eyewitnesses actually saw.

The NTSB’s investigation was, in its words, “by far the most expensive and the most extensive in the history of the Board.” In the end, the NTSB concluded that the probable

¹The NTSB “is responsible for the investigation, determination of facts, conditions, and circumstances and the cause or probable cause or causes of: all accidents involving civil aircraft, and certain public aircraft.” 49 C.F.R. § 800.3(a).

cause of the disaster was an explosion of the aircraft's center wing fuel tank, resulting from the ignition of a flammable fuel and air mixture in the tank. Although the NTSB could not determine with certainty what caused the mixture to ignite, it believed the explosion was most likely initiated by a short circuit. The NTSB determined that the explosion could not have been caused by the detonation of a bomb or a missile strike.² A multi-agency analysis of the wreckage, ninety-five percent of which was recovered, found no evidence of bomb or missile damage.³ The unrecovered pieces of the aircraft, the NTSB concluded, were not by themselves large enough to encompass all of the damage that would have been caused by a bomb or a missile. Finally, although trace amounts of explosives were found on three separate pieces of the wreckage, "the lack of any corroborating evidence associated with a high-energy explosion" led the NTSB to conclude that the crash was not caused by a bomb or missile strike.

To explain the more than 250 eyewitness accounts that described "a streak of light" or "a flarelike object" rising in the sky, the NTSB developed what Lahr calls the "zoom-climb" theory. In essence, the NTSB's theory was that the fuel tank explosion caused the front portion of the aircraft's fuselage to separate from the rest of the plane and fall to the ocean. Having lost the considerable mass of the forward fuselage, the remainder of the plane, now much lighter and on fire, was rapidly propelled upwards in the sky, ascending more than 2,000 feet before itself falling back toward the ocean. As the burning plane fell, the wings separated from the body of the aircraft, and the wreckage erupted into a "fuel-fed fireball" that descended into the water. Thus, the NTSB contends, the streak of light observed by the witnesses was not a missile but the burning plane itself, traveling upward in vari-

²The NTSB also ruled out structural failure as a cause of the crash.

³This analysis involved the NTSB, the FBI, the Bureau of Alcohol, Tobacco, and Firearms ("ATF"), and the Federal Aviation Administration ("FAA").

ous stages of “crippled flight” after the initial explosion took place.⁴

The NTSB arrived at this conclusion after analyses of radar data, flight data recorder information, and proprietary information about the aircraft’s weight and aerodynamics provided by Boeing. NTSB investigator Dennis Crider completed a Trajectory Study, which attempted to determine the location of the plane when various parts fell by mapping the trajectory of the wreckage as it fell to the ocean floor. This study led to the conclusion that the forward part of the plane fell off first. Crider also conducted a computer-modeled flight-path simulation to determine the motion of the main body of the aircraft after the forward fuselage fell off. This simulation demonstrated that the rest of the aircraft would have continued to ascend after the loss of the front of the plane, only later descending toward the ocean. The NTSB also used computer programs, named BALLISTIC and BREAKUP, to figure out the path of certain pieces of the aircraft and the moment when the forward fuselage separated from the main body.

The CIA’s analysis also concluded that the eyewitnesses did not see a missile. In its investigation, the CIA examined eyewitness reports, radar tracking data, and information from the cockpit voice and flight data recorders to reconstruct the flight path of the aircraft. The CIA analysts concluded, in accord with the NTSB, that after the initial explosion, the aircraft “pitched upward” more than 3,000 feet before a fireball erupted, and the remainder of the aircraft then descended rapidly. Thus, like the NTSB, the CIA found that “[t]he eyewitness sightings of greatest concern—the ones which originally

⁴The NTSB concedes that this explanation does not account for fifty-six eyewitnesses who reported seeing a streak of light ascending vertically or originating at the horizon. It attributes this discrepancy to deficiencies in interviewing, documentation, and the eyewitnesses’ memory or perception.

raised the possibility of a missile—took place *after* the aircraft exploded.”⁵

Both the NTSB and the CIA developed video animations depicting their conclusions regarding the explosion and the subsequent trajectory of the aircraft. The NTSB presented four videos depicting “graphical accident reconstructions” at a December 1997 public hearing. The CIA’s video, “What Did the Eyewitnesses See?” was broadcast on CNN in November 1997. The CIA did not release any additional analysis of the accident or conclusions about what the eyewitnesses saw. After the video aired, the CIA continued to refine its analysis based on new data from the NTSB, but its ultimate conclusion—that eyewitnesses did not see a missile—did not change, and the agency did not issue a final report.

In 2000, the NTSB issued its comprehensive final report on the crash, explaining its analysis and conclusions in detail. This report, as well as almost 3,000 documents from the investigation, is publicly available. Included among the documents in the public record are FBI summaries of more than 700 eyewitness accounts, some with names and other identifying information redacted.

B. The FOIA Requests and Proceedings in the District Court

Lahr, a former Navy and commercial pilot and a member of the Air Line Pilots Association, believes the TWA Flight 800 investigation resulted in a massive government cover-up of the real cause of the crash. The true story, according to Lahr, is that an errant Navy missile caused the crash. The “zoom-climb” theory is not plausible, Lahr maintains, and was fraudulently concocted to mislead the public.

⁵The CIA’s initial conclusion, reported in 1997, that the plane ascended 3,200 feet differs from the NTSB’s conclusion, reported in 2000, that the maximum ascent was about 2,000 feet.

Lahr, in an attempt to prove his thesis, made 145 FOIA requests to the NTSB in October 2003. Lahr informed the NTSB that he was “seeking the NTSB’s zoom-climb data and calculations in order to validate or invalidate the NTSB’s and CIA’s zoom-climb conclusions.” He further elaborated:

The FOIA Requests are for all records upon which all publicly released aircraft flight path climb-conclusions are based, including, but not limited to, the underlying data and basis of all written reports and all video-animation-depictions. This includes but is not limited to all computer simulation and animation programs, and the data entered into all such programs, in each case correlating which data was entered into which program.

At the same time, Lahr made 105 FOIA requests to the CIA. Citing the November 1997 video depiction of the aircraft’s trajectory, Lahr indicated that the request was for all records on which the CIA based its conclusions regarding the aircraft’s climb and flight path, including those reported in the video depiction.

In response to these requests, both agencies conducted searches for responsive records. They released certain documents (some of which were redacted), withheld some documents, and found no responsive documents for some requests. Dissatisfied with the agencies’ responses, Lahr filed this lawsuit under FOIA. The agencies moved for summary judgment, contending that their searches were adequate and that their withholding of certain records or parts of records was proper under various statutory exemptions. On the government’s summary judgment motions, the district court, in two thorough opinions, decided in Lahr’s favor on 26 of the 32 disputed requests.

The government appeals only one aspect of the district court’s ruling. The agencies released eleven documents with

the names of eyewitnesses and FBI agents redacted, citing Exemptions 6 and 7(C) of FOIA.⁶ On summary judgment, the district court ordered the agencies to release these names, holding that the public interest in disclosure outweighed the privacy interests of the witnesses and agents. The agencies appeal from this decision.

Lahr cross-appeals several of the district court's rulings. The agencies withheld four documents⁷ under FOIA Exemption 5, relating to documents protected under the deliberative process privilege.⁸ The district court held that Exemption 5 applied to these documents, as they were both "predecisional" and "deliberative" and thus properly withheld from disclosure.

Lahr's FOIA request also sought information about the agencies' computer simulations. He asked for the software programs used by the CIA and the NTSB in running their simulations, as well as the data inputs the agencies used to generate their results. Although the district court required the government to disclose most of the programs themselves, it held that the agencies could withhold much of the data, including the data inputs used by the BALLISTIC program

⁶Exemption 6 states that FOIA does not apply to "personnel and medical files and similar files the disclosure of which would constitute a clearly unwarranted invasion of personal privacy." 5 U.S.C. § 552(b)(6). Exemption 7(C) provides that FOIA does not apply to matters that are "records or information compiled for law enforcement purposes, but only to the extent that the production of such law enforcement records or information . . . could reasonably be expected to constitute an unwarranted invasion of personal privacy." *Id.* § 552(b)(7)(C).

⁷As the government explained at oral argument, the NTSB subsequently released one of these documents, leaving only three such documents at issue in this appeal.

⁸Exemption 5 provides that FOIA does not apply to "interagency or intra-agency memorandums or letters which would not be available by law to a party other than an agency in litigation with the agency." 5 U.S.C. § 552(b)(5).

that Lahr claims determined the aircraft's flight path after the explosion. Lahr appeals from this decision.

Lahr also contends that the agencies' search for responsive records was inadequate. The district court held the government's search adequate in some respects but not others. On appeal, Lahr contests the district court's conclusion that certain aspects of the agencies' search were adequate.

Finally, Lahr contends that the government's affidavit pursuant to *Vaughn v. Rosen*, 484 F.2d 820 (D.C. Cir. 1973)—generally known as the “*Vaughn* index”—insufficiently described the documents withheld by the agencies and the FOIA exemptions that apply to them.

For the reasons stated below, we reverse the district court's conclusion that the government must disclose the names of the eyewitnesses and FBI agents, and affirm the remainder of the district court's rulings.⁹

II. DISCUSSION

[1] FOIA “was enacted to facilitate public access to Government documents.” *U.S. Dep’t of State v. Ray*, 502 U.S. 164, 173 (1991). The statute provides public access to official information “shielded unnecessarily” from public view and establishes a “judicially enforceable public right to secure such information from possibly unwilling official hands.” *Dep’t of Air Force v. Rose*, 425 U.S. 352, 361 (1976) (internal quotation marks omitted). Doing so, it was hoped, would “en-

⁹While the appeals of the district court's summary judgment decisions were pending, the district court granted Lahr's motion for attorneys' fees, awarding him \$146,442 in costs and fees. The government has appealed this award, arguing that, if it prevails on its appeal of the summary judgment decisions, the fee award should be vacated and remanded to the district court for a new determination. Because we reverse part of the district court's summary judgment order, we remand the award of attorneys' fees for reconsideration.

sure an informed citizenry, vital to the functioning of a democratic society, needed to check against corruption and to hold the governors accountable to the governed.” *John Doe Agency v. John Doe Corp.*, 493 U.S. 146, 152 (1989) (internal quotation marks omitted).

[2] At the same time, FOIA contemplates that some information may legitimately be kept from the public. The statute contains nine enumerated exemptions allowing the government to withhold documents or portions of documents. *See* 5 U.S.C. § 552(a)(1)-(9). FOIA’s “strong presumption in favor of disclosure” means that an agency that invokes one of the statutory exemptions to justify the withholding of any requested documents or portions of documents bears the burden of demonstrating that the exemption properly applies to the documents. *Ray*, 502 U.S. at 173. Moreover, in light of FOIA’s purpose of encouraging disclosure, we have held that “its exemptions are to be interpreted narrowly.” *Assembly of Cal. v. U.S. Dep’t of Commerce*, 968 F.2d 916, 920 (9th Cir. 1992).

In seeking to justify the withholding of some documents or portions of documents responsive to Lahr’s request, the agencies have invoked several FOIA exemptions. We discuss the documents and the relevant exemptions in turn.

A. Eyewitness and FBI Agent Names

In response to Lahr’s request, the agencies released several documents that summarize or discuss eyewitness accounts and contain analysis by FBI agents involved in the criminal investigation. The agencies redacted the names of the eyewitnesses and FBI agents in eleven of these documents, but the district court ordered the government to release the names. The government contends that it is entitled to withhold these names from disclosure under FOIA Exemptions 6 and 7(C), which generally recognize that individual privacy interests

may justify limiting public disclosure of governmental information in certain contexts. *See Ray*, 502 U.S. at 174-75.

[3] Specifically, Exemption 6 states that FOIA does not apply to “personnel and medical files and similar files the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.” 5 U.S.C. § 552(b)(6). Exemption 7(C) provides that FOIA does not apply to “records or information compiled for law enforcement purposes, but only to the extent that the production of such law enforcement records . . . could reasonably be expected to constitute an unwarranted invasion of personal privacy.” 5 U.S.C. § 552(b)(7)(C).

Exemptions 6 and 7(C) speak of an “unwarranted” invasion of personal privacy, not any invasion. So, to determine whether a record is properly withheld, we must balance the privacy interest protected by the exemptions against the public interest in government openness that would be served by disclosure. *See Nat'l Archives & Records Admin. v. Favish*, 541 U.S. 157, 171 (2004); *U.S. Dep't of Def. v. Fed. Labor Relations Auth. (FLRA)*, 510 U.S. 487, 494-95 (1994). Although both exemptions require such balancing, the analysis under the two provisions is not the same, as “Exemption 7(C)’s privacy language is broader than the comparable language in Exemption 6 in two respects.” *U.S. Dep't of Justice v. Reporters Comm. for Freedom of the Press*, 489 U.S. 749, 756 (1989).

[4] Specifically, Exemption 6 requires that the invasion of privacy be “*clearly* unwarranted,” a requirement omitted from the language of Exemption 7(C). *See id.* Second, whereas Exemption 7(C) prevents disclosure of information that “could reasonably be expected to constitute” an unwarranted invasion of privacy, Exemption 6 limits the protection to information that “would constitute” an unwarranted invasion of privacy. *Id.* at 755-56; *see also Hunt v. FBI*, 972 F.2d 286, 287-88 (9th Cir. 1992). In other words, although both exemp-

tions require the court to engage in a similar balancing analysis, they “differ in the magnitude of the public interest that is required to override the respective privacy interests protected by the exemptions.” *FLRA*, 510 U.S. at 496 n.6.

The district court found that the documents at issue were compiled for law enforcement purposes and so met the threshold test for Exemption 7(C). Lahr has not challenged this determination on appeal. So, as the government claimed both exemptions for each disputed redaction, it need meet only the lower threshold of Exemption 7(C). *See Hunt*, 972 F.3d at 288. Because both exemptions require balancing of public and private interests, cases arising under Exemption 6 also inform our analysis. *Id.*

In considering the personal privacy interests at stake, the Supreme Court has emphasized that “the concept of personal privacy under Exemption 7(C) is not some limited or cramped notion of that idea.” *Favish*, 541 U.S. at 165 (internal quotation marks omitted). Instead, personal privacy interests encompass a broad range of concerns relating to an “individual’s control of information concerning his or her person,” *Reporters Comm.*, 489 U.S. at 763, and an “interest in keeping personal facts away from the public eye.” *Id.* at 769.

The Supreme Court has also clarified the nature of the relevant public interests served by disclosure. Once the government has identified a cognizable privacy interest, “the *only* relevant public interest in the FOIA balancing analysis is the extent to which disclosure of the information sought would shed light on an agency’s performance of its statutory duties or otherwise let citizens know what their government is up to.” *Bibles v. Or. Natural Desert Ass’n*, 519 U.S. 355, 355-56 (1997) (per curiam) (alteration and internal quotation marks omitted). Where there are relevant privacy interests at stake, a requester must demonstrate that the interest served by disclosure “is a significant one, an interest more specific than having the information for its own sake,” and that disclosure

is likely to advance that interest. *Favish*, 541 U.S. at 172. Where the public interest advanced is that officials were negligent or that they otherwise improperly performed their duties, the requester must establish “more than a bare suspicion” of wrongdoing, by “produc[ing] evidence that would warrant a belief by a reasonable person that the alleged Government impropriety might have occurred.” *Id.* at 174.

Applying these considerations, the district court acknowledged the eyewitnesses’ and FBI agents’ privacy interest in avoiding exposure of their connection to the incident, but found this interest weak. On the other hand, the district court found that Lahr had introduced sufficient evidence of possible government wrongdoing and that disclosure of the redacted names might direct Lahr to individuals who could “repudiate what the government attributed to them or might even declare that the government misused or misrepresented the information they provided.” Accordingly, in balancing the personal privacy interests of the eyewitnesses and FBI agents against the public interest in disclosure, the district court concluded that the balance favored disclosure.

Whether or not we would agree with that conclusion absent controlling case law, we are compelled by precedent—especially by a recent case of this court, *Forest Service Employees for Environmental Ethics v. U.S. Forest Service*, 524 F.3d 1021 (9th Cir. 2008), not available to the district court, to reverse this holding.

1. Privacy Interests

a. Eyewitnesses

[5] We begin with the privacy interests of the eyewitnesses.¹⁰ Releasing unredacted documents would reveal publicly these

¹⁰Because the privacy interests of the eyewitnesses and FBI agents differ, we discuss the interests of each in turn.

eyewitnesses' involvement in a controversial criminal investigation. The Supreme Court has indicated that the privacy interests of citizens are highest when disclosure would reveal information collected about them in conjunction with a criminal inquiry, especially where their link to the investigation is the result of "mere happenstance." *Favish*, 541 U.S. at 166. In *Favish*, the Court observed that

[I]aw enforcement documents obtained by Government investigators often contain information about persons interviewed as witnesses or initial suspects but whose link to the official inquiry may be the result of mere happenstance. There is special reason, therefore, to give protection to this intimate personal data In this class of cases where the subject of the documents is a private citizen, the privacy interest is at its apex.

Id. (alteration, citation, and internal quotation marks omitted); *see also Reporters Comm.*, 489 U.S. at 765 ("[D]isclosure of records regarding private citizens, identifiable by name, is not what the framers of the FOIA had in mind."). Nothing in the record suggests that the eyewitnesses' connection to the investigation was anything more than coincidence. They just happened to be in the vicinity when the tragedy occurred, and so saw the incident.

[6] Some concerns about connecting private individuals to criminal investigations are not present here—for instance, the potential for physical harm or the disclosure of particularly embarrassing private details shared in the course of certain investigations. *See, e.g., Ray*, 502 U.S. at 175-76; *Hunt*, 972 F.2d at 288. The potential for unwanted contact by third parties, including the plaintiff, media entities, and commercial solicitors, nonetheless remains.¹¹ The case law establishes that

¹¹The district court observed that release of the unredacted documents would disclose only the names of eyewitnesses, and not their home

protection from such unwanted contact facilitated by disclosure of a connection to government operations and investigations is a cognizable privacy interest under Exemptions 6 and 7(C). *See, e.g., FLRA*, 510 U.S. at 501 (protecting the home addresses of U.S. Department of Defense employees from disclosure to union representatives, citing their “nontrivial privacy interest in nondisclosure, and in avoiding the influx of union-related mail, and . . . telephone calls or visits, that would follow disclosure”); *Minnis v. U.S. Dep’t of Agric.*, 737 F.2d 784, 787-88 (9th Cir. 1984) (finding an Exemption 6 privacy interest in names and addresses of permit holders seeking to avoid commercial contact); *see also, e.g., McDonnell v. United States*, 4 F.3d 1227, 1255-56 (3d Cir. 1993) (upholding the nondisclosure under Exemption 7(C) of the names of living witnesses interviewed in the criminal investigation of a 1934 fire aboard an ocean liner).

Applying these precedents, we recently held in *Forest Service Employees* that government employees cooperating as witnesses in a disaster investigation had a cognizable privacy interest under Exemption 6 in preventing the disclosure of their names in connection with the incident and the official investigation. 524 F.3d at 1025-27. The Forest Service had released a report investigating its role in an accident in which two firefighters died fighting a wildfire (the “Cramer Fire”),

addresses, phone numbers, or other personal information. In this regard, the information is less invasive than information some courts have protected to avoid third-party harassment. *See, e.g., Bibles*, 519 U.S. 355-56 (mailing lists); *FLRA*, 510 U.S. at 502 (home addresses); *Painting Indus. of Haw. Mkt. Recovery Fund v. U.S. Dep’t of Air Force*, 26 F.3d 1479, 1484-85 (9th Cir. 1994) (names, addresses, and payroll records). Nevertheless, the release of the witnesses’ names presumably is sufficient to enable Lahr to contact them; contacting the witnesses is precisely why he wants the information. In fact, the ability to contact the witnesses with only their names formed the basis of the district court’s conclusion that their disclosure would advance the public interest: “Disclosure might nevertheless assist Plaintiff in investigating and uncovering government malfeasance by, for instance, leading to individuals who might repudiate what the government attributed to them”

but redacted the names of all Forest Service employees who were mentioned in the report. *Id.* at 1023. Although the individuals in *Forest Service Employees* were government employees, most were named in the report simply as cooperating witnesses in the investigation rather than as potential wrongdoers. *Id.* at 1026.

Discussing the cognizable privacy interests at stake, we observed that “the potential for harassment that drew the district court’s attention was that which would be presented by the media, curious neighbors, and the FSEEE [plaintiff Forest Service Employees for Environmental Ethics] itself.” *Id.* Like Lahr, the FSEEE planned to contact the individuals named in the report should their identities be released, and, “[m]oreover, in light of the significant public attention the Cramer Fire received, it is likely that the media and others would join the FSEEE in such pursuit.” *Id.*

Further, in *Forest Service Employees*, “[t]he fact that the record does not indicate that any of the employees ha[d] spoken out in the five years since the incident occurred le[d] us to conclude that such contacts [were] unwanted.” *Id.* Similarly here: Although some of the eyewitnesses have spoken out, and indeed, have joined Lahr in insisting that the NTSB and CIA reconstructions do not accord with their perceptions, others have not come forward publicly despite the widespread publicity given the reconstruction of the incident. It is presumably these heretofore silent witnesses whom Lahr wishes to contact. *Forest Service Employees* indicates that these witnesses have by their silence indicated that contact is unwelcome.

[7] In short, *Forest Service Employees* dictates the result in this case. As in *Forest Service Employees*, the plaintiff plans to contact the witnesses if their names became available. The crash of TWA Flight 800 generated vastly more national and international media attention than the Cramer Fire, making inquiries by media representatives substantially more likely

than in *Forest Service Employees*.¹² Moreover, to identify a cognizable privacy interest under Exemption 7(C), we need not conclude that an invasion of privacy would occur with certainty, but only that it could reasonably be expected. *See Hunt*, 972 F.2d at 288. Applying the holdings of *Forest Service Employees* and its predecessors that avoiding undesired contacts is a protected personal privacy interest—we conclude that the eyewitnesses have more than a de minimis privacy interest in avoiding unwanted contacts by Lahr and others.

b. FBI Agents

[8] The CIA asserts that the FBI agents have a privacy interest “in not being subjected to unofficial questioning about the analytic project or investigation at issue and in avoiding annoyance or harassment in their official, business, and private lives.” We have held that “individuals do not waive all privacy interests in information relating to them simply by taking an oath of public office, but by becoming public officials, their privacy interests are somewhat reduced.” *Lissner v. U.S. Customs Serv.*, 241 F.3d 1220, 1223 (9th Cir. 2001) (citation omitted). The directly applicable precedents nonetheless establish that “FBI agents have a legitimate interest in keeping private matters that could conceivably subject them to annoyance or harassment.” *Hunt*, 972 F.2d at 288; *see also*, *e.g.*, *Wood v. FBI*, 432 F.3d 78, 88-89 (2d Cir. 2005); *McDonnell*, 4 F.3d at 1255; *Maynard v. CIA*, 986 F.2d 547, 566 (1st Cir. 1993).

[9] In particular, courts have recognized that agents retain an interest in keeping private their involvement in investigations of especially controversial events. *See, e.g.*, *Lesar v. U.S. Dep’t of Justice*, 636 F.2d 472, 487-88 (D.C. Cir. 1980)

¹²Because FOIA contemplates that “if the information is subject to disclosure, it belongs to all,” *Favish*, 541 U.S. at 172, we must consider the effect of releasing the information to the general public and not just to the individual requestor.

(“[P]ublic identification of the individuals involved in the FBI’s investigation of Dr. [Martin Luther] King [Jr.] would constitute an unwarranted invasion of their privacy *in light of the contemporary and controversial nature of the information.*”) (emphasis added). And, lower level officials, like the FBI agents involved here, “generally have a stronger interest in personal privacy than do senior officials.” *Dobronski v. FCC*, 17 F.3d 275, 280 n.4 (9th Cir. 1994).

[10] Given the controversial nature of the FBI’s investigation and the level of media attention devoted to the accident, *Hunt* directs the conclusion here. Should the names of the FBI agents mentioned in the requested documents be revealed, there is some likelihood that the agents would be subjected to unwanted contact by the media and others, including Lahr, who are skeptical of the government’s conclusion. Under the case law of this court and others, this potential is sufficient to establish a cognizable privacy interest.

Lahr contends that the district court properly found the privacy interests of the FBI agents diminished in the face of allegations of official impropriety. We have held that an investigator’s privacy interest may be reduced when there are doubts about the integrity of his efforts. *See Castaneda v. United States*, 757 F.2d 1010, 1012 (9th Cir. 1985) (per curiam) (“When the reliability of the investigator’s information is in doubt, it is difficult to argue that he has a right to be sheltered from public scrutiny.”). There is no evidence here, however, that the particular FBI agents mentioned in the requested documents themselves behaved improperly, or that their individual efforts were unreliable. *See Lissner*, 241 F.3d at 1223-24 (noting the diminished Exemption 6 privacy interests of two city police officers who were arrested for smuggling steroids in their own arrest reports); *Dobronski*, 17 F.3d at 278-79 (holding that an official’s Exemption 6 privacy interests were diminished where the official’s own misconduct was at issue in the requested documents). In fact, Lahr seeks the names of these agents in part to contact them about

alleged impropriety by *other* FBI agents involved in the suspected cover-up. Although the public interest in disclosing government impropriety may outweigh an agent's privacy interests in some circumstances, we cannot say that an FBI agent's privacy interests are reduced because of speculation that he may have information about general improper conduct by the FBI.

[11] Accordingly, as with the eyewitnesses, the case law compels the conclusion that the FBI agents have a cognizable privacy interest in withholding their names in the requested documents.

2. Public Interest

[12] Holding that the eyewitnesses and FBI agents have cognizable privacy interests does not end the analysis. We must consider whether these interests are outweighed by the public interest advanced in disclosing the eyewitness and agent names in the requested documents.

To advance a relevant public interest, the release of the eyewitness and FBI agent names must "shed light on an agency's performance of its statutory duties or otherwise let citizens know what their government is up to." *FLRA*, 510 U.S. at 497 (alteration and internal quotation marks). That is, the evidence must show some nexus between the specific requested information and unveiling agency misconduct—the public interest advanced here. *See Favish*, 541 U.S. at 172-73. In this case, because only the names of witnesses and agents are missing from the released documents, under the applicable precedents the "marginal additional usefulness" of the names in exposing government misconduct must outweigh the privacy interests at stake. *Painting Indus.*, 26 F.3d at 1486.

The district court concluded that "the public interest in uncovering agency malfeasance and wrongdoing outweighs" any privacy interest retained by the eyewitnesses or FBI

agents. Specifically, the district court held that, with respect to the eyewitnesses' names, “[d]isclosure might . . . assist Plaintiff in investigating and uncovering government malfeasance by, for instance, leading to individuals who might repudiate what the government attributed to them or might even declare that the government misused or misrepresented the information they provided.” In *Forest Service Employees*, we viewed skeptically the assertion that the public interest is materially advanced by disclosing names of individuals redacted from documents already in the public record. We observed:

[T]he identities of the employees alone will shed no new light on the Forest Service’s performance of its duties beyond that which is already publicly known. Instead, the FSEEE seeks to contact these employees itself . . . to confirm the veracity of the publicly-available reports. We have previously expressed skepticism at the notion that such derivative use of information can justify disclosure under Exemption 6.

524 F.3d at 1027; *see also Ray*, 502 U.S. at 178 (questioning, but not deciding, whether a cognizable public interest is presented where “[t]he asserted public interest . . . stems not from the disclosure of the redacted information itself, but rather from the hope that respondents [who made the FOIA requests], or others, may be able to use that information to obtain additional information outside the Government files”). Balancing the relevant privacy and public interests, we noted in *Forest Service Employees* that “the only ‘additional public benefit’ the release of the employees’ personal information would provide”—the ability to contact witnesses or employees to obtain information not contained in the report—“was ‘inextricably intertwined’ with the invasion of the employees’ privacy.” 524 F.3d at 1028 (quoting *Painting Indus.*, 26 F.3d at 1485). After so recognizing, *Forest Service Employees* went on to hold that when “the only way the release of the

identities” will benefit the public “is if the public uses such information to contact the employees directly,” such use cannot justify release of the information. *Id.*

[13] The situation presented here is for all relevant purposes identical to that in *Forest Service Employees*, so we are bound by the outcome in that case of the balancing of public and private interests. Lahr already possesses the substance of the eyewitnesses’ reports and the FBI agents’ thoughts as they are expressed in the released memoranda and emails. The only way that the identities of the eyewitnesses and FBI agents mentioned in the documents already released would have public value is if these individuals were contacted directly by the plaintiff or by the media. Under *Forest Service Employees*, such use is insufficient to override the witnesses’ and agents’ privacy interests, as the disclosure would bring about additional useful information only if direct contacts, furthering the privacy intrusion, are made. *Id.*

[14] Accordingly, we reverse the district court’s decision ordering the agencies to release the names of eyewitnesses and FBI agents.

B. “Deliberative Process” Documents

Lahr challenges the agencies’ withholding of three documents the agencies claim are part of their “deliberative process” and thus shielded from disclosure under Exemption 5. Exemption 5 provides that FOIA does not apply to “interagency or intra-agency memorandums or letters which would not be available by law to a party other than an agency in litigation with the agency.” 5 U.S.C. § 552(b)(5). Exemption 5 “shields ‘those documents, and only those documents, normally privileged in the civil discovery context.’” *Carter v. U.S. Dep’t of Commerce*, 307 F.3d 1084, 1088 (9th Cir. 2002) (quoting *NLRB v. Sears, Roebuck & Co.*, 421 U.S. 132, 149 (1975)). “In light of the strong policy of the FOIA that the public is entitled to know what its government is doing and

why, [E]xemption 5 is to be applied as narrowly as consistent with efficient Government operation.” *Maricopa Audubon Soc’y v. U.S. Forest Serv.*, 108 F.3d 1089, 1093 (9th Cir. 1997) (internal quotation marks omitted).

[15] The agencies invoke the “deliberative process” privilege, which shields certain intra-agency communications from disclosure to “allow agencies freely to explore possibilities, engage in internal debates, or play devil’s advocate without fear of public scrutiny.” *Assembly of Cal.*, 968 F.2d at 920. To fall within this privilege, “a document must be both ‘predecisional’ and ‘deliberative.’” *Id.*

A “predecisional” document is one prepared in order to assist an agency decisionmaker in arriving at his decision, and may include recommendations, draft documents, proposals, suggestions, and other subjective documents which reflect the personal opinions of the writer rather than the policy of the agency. A predecisional document is a part of the “deliberative process,” if the disclosure of the materials would expose an agency’s decisionmaking process in such a way as to discourage candid discussion within the agency and thereby undermine the agency’s ability to perform its functions.

Id. (alteration, citations, and internal quotation marks omitted).

Lahr appeals the district court’s grant of summary judgment, after review of the documents *in camera*, as to three documents withheld pursuant to the deliberative process privilege.¹³ Lahr first argues on appeal that government misconduct bars the application of the exemption. He also challenges

¹³The district court denied the agencies summary judgment as to some other documents withheld under this exemption. The agencies do not appeal this ruling.

the district court’s conclusion that the documents were predecisional and deliberative. After reviewing the documents *in camera*, and giving deference to the district court’s factual findings on “whether disclosure of the requested information would reveal anything about the agency’s decisional process,” *Carter*, 307 F.3d at 1088 (internal quotation marks omitted), we hold that, insofar as they were challenged in the district court, they properly fall within Exemption 5.

As a threshold matter, Lahr contends that evidence of government misconduct, crime, and fraud bars the application of Exemption 5. *See In re Sealed Case*, 121 F.3d 729, 738 (D.C. Cir. 1997) (“[W]here there is reason to believe the documents sought may shed light on government misconduct, the privilege is routinely denied, on the grounds that shielding internal government deliberations in this context does not serve the public’s interest in honest, effective government.” (internal quotation marks omitted)). Lahr did not so argue in the district court, and so waived the issue. *See A-1 Ambulance Serv., Inc. v. County of Monterey*, 90 F.3d 333, 338 (9th Cir. 1996).

Lahr argues that we may nonetheless reach the question because it is purely one of law. We do have limited discretion to consider purely legal arguments raised for the first time on appeal, *see Parks Sch. of Bus., Inc. v. Symington*, 51 F.3d 1480, 1488 (9th Cir. 1995), but that is so only where “consideration of the issue would not prejudice the [opposing party’s] ability to present relevant facts that could affect our decision.” *Kimes v. Stone*, 84 F.3d 1121, 1126 (9th Cir. 1996). Here, considering the issue for the first time on appeal would unfairly prejudice the government.

Lahr did, of course, make general allegations of government misconduct in the district court, as his entire request is an attempt to prove a massive government conspiracy. But disproving the general, substantive allegations of misconduct is not the government’s obligation in FOIA litigation. Nor do Lahr’s misconduct allegations specifically relate to the docu-

ments at issue under Exemption 5. Accordingly, the government was not on notice before the district court that its failure to submit evidence in response to those allegations would vitiate its deliberative process privilege. We hold, therefore, that Lahr waived this argument by not advancing it in the district court.¹⁴

1. Predecisional and Deliberative

Lahr's contention is that the agencies improperly withheld these three documents under the deliberative process privilege because they were created after the agency's final decision, for the purpose of interpreting or explaining the decision after the fact. The district court concluded that the CIA's video animation, presented to the public in November 1997 (before the date stated on Records 27 and 28), was a final decision. But the court clarified, however, that the video was not necessarily

the *only* final disposition. The CIA could have published some sort of addendum stating it had received and considered new data and that it had (or had not) changed its ultimate conclusion. Although this is not what occurred, it also is not what was required. Defendants have presented uncontroverted evidence that the CIA analyzed new data that led it to reach a conclusion. That the later conclusion was no differ-

¹⁴We also have discretion to reach issues not raised before the trial court in "the exceptional cases in which review is necessary to prevent a miscarriage of justice or to preserve the integrity of the judicial process [or] when a new issue arises while appeal is pending because of a change in the law." *Bolker v. Comm'r of Internal Revenue*, 760 F.2d 1039, 1042 (9th Cir. 1985) (citation and internal quotation marks omitted). Lahr invokes this exception as well, but there is no intervening change in the law, and Lahr cannot meet the miscarriage of justice standard for the same reasons already surveyed, most especially because he has not made any allegation of a connection between these particular documents and government misconduct.

ent than the previous one does not preclude it from being “final” for purposes of FOIA.

Lahr argues that the district court’s analysis is incorrect. Because the CIA’s video was a final decision and the CIA issued no subsequent final decision on the matter, Lahr argues, the records that post date the video cannot be “predecisional.”

Contrary to Lahr’s position, the fact that the CIA did not issue a subsequent report is, under the applicable case law, not dispositive of whether the records are “predecisional.” *See Sears*, 421 U.S. at 151 n.18 (cautioning that the “emphasis on the need to protect *pre-decisional* documents does not mean that the existence of the privilege turns on the ability of an agency to identify a specific decision in connection with which a memorandum is prepared”). At the same time, the absence of an identifiable later decision is of considerable relevance to the deliberative process privilege, as evidence of whether a later decision was indeed under consideration. Otherwise, the privilege would be boundless, as “[a]ny memorandum always will be ‘predecisional’ if referenced to a decision that possibly may be made at some undisclosed time in the future.” *Assembly of Cal.*, 968 F.2d at 921.

Applying this understanding, we have rejected the argument that “a continuing process of agency self-examination is enough to render a document ‘predecisional.’” *Maricopa Audubon Soc’y*, 108 F.3d at 1094. The documents must be prepared to assist an agency decision-maker in arriving at a future particular decision, although we need not be able to identify retroactively “the actual decision that was made” on the basis of the withheld documents. *Id.*; *see also Sears*, 421 U.S. at 151 n.18. Hence, we have rejected the application of the privilege to protect from disclosure the routine collection of data and analysis where the agency could point only to speculative or generalized purposes for which the information would be used. *See Assembly of Cal.*, 968 F.2d at 921 (hold-

ing that the possible future use of adjusted census data in calculating population estimates between censuses did not render the data “predecisional”).

[16] Further, although an agency’s issuance of a “final decision” with respect to a particular issue does not necessarily preclude the agency from withholding documents prepared in a subsequent evaluation of the question with the goal of confirming or rejecting its earlier conclusions, post-decisional records fall outside the deliberative process privilege if they follow a final decision and are designed to explain a decision already made. As the Supreme Court recognized in *Sears*, the purpose of the deliberative process privilege is to protect the quality of an agency’s decision; revealing “communications made after the decision and designed to explain it” do not affect a decision’s quality. *Sears*, 421 U.S. at 152.

Under the deliberative process privilege, a record must not only be predecisional, but also “deliberative.” A document is “deliberative” if “the disclosure of the materials would expose an agency’s decisionmaking process in such a way as to discourage candid discussion within the agency and thereby undermine the agency’s ability to perform its functions.” *Assembly of Cal.*, 968 F.2d at 921 (internal quotation marks omitted). We give deference to the district court’s factual determination concerning whether that standard is met. *Carter*, 307 F.3d at 1088.¹⁵

¹⁵Lahr also contends that the district court erred in failing to apply a “balancing test” to the government’s withholding of the three documents under Exemption 5. Relying on *General Services Administration v. Benson*, 415 F.2d 878, 880 (9th Cir. 1969), Lahr contends that traditional equity principles apply to determine whether withholding is warranted under Exemption 5. See *Benson*, 415 F.2d at 880 (holding that courts must weigh “the effects of disclosure and nondisclosure, according to traditional equity principles”). We have subsequently explained that the FOIA context is different, and that *Benson*

merely recognized that where documents normally privileged in the civil discovery context are involved, courts may employ in

We have reviewed the records *in camera* and discuss below in general terms the applicability of the deliberative process privilege with respect to each of the withheld documents.¹⁶

2. Documents at Issue

a. Record 27¹⁷

The first document (“Record 27”) is an eighteen-page CIA document dated March 1998, described by the agency as a “[d]raft report containing analysis and preliminary conclusions regarding further assessment of TWA Flight 800,” on the subject of “Dynamic Flight Simulation.” The document describes the steps CIA analysts took in simulating the flight path of the aircraft, the data and other information important

exemption 5 cases the same equitable principles that they may use to fix the scope of discovery in civil litigation against an agency. Except in this limited sense, however, courts do not possess ‘equitable discretion’ to deny FOIA requests.

Maricopa Audubon Soc'y v. U.S. Forest Serv., 108 F.3d 1082, 1088 n.4 (9th Cir. 1997). Thus, any equitable discretion retained by the district court was limited to determining whether the withheld documents fell within the scope of the claimed privilege. Once the court concluded that they did fall within the privilege, and thus fell within one of FOIA’s exemptions, the district court had no discretion to order the documents released pursuant to equitable principles. We note, in addition, that the determination whether a particular document is subject to discovery in a specific lawsuit will not necessarily determine whether that same document is subject to FOIA release. The identity of litigants and the need for the document in litigation may render the document nonprivileged in litigation. *See FTC v. Warner Commc'ns, Inc.*, 742 F.2d 1156, 1161 (9th Cir. 1984) (per curiam).

¹⁶As the government’s *Vaughn* index did not supply sufficient information for us to determine whether the documents fell within the privilege, and because the content-specific nature of the inquiry makes it unlikely that a more specific *Vaughn* index would have aided our review, we ordered the government to produce these documents for our *in camera* inspection.

¹⁷Like the district court, we identify the documents by the Plaintiff’s record numbers.

to the calculations, particular challenges the analysts faced in conducting the analysis, and recommendations for agency decisionmakers. Importantly, the document explicitly discusses refining the simulation’s conclusions based on additional and more complete data that became available over the course of the investigation, which continued after the release of the November 1997 animation. The district court ordered only the title, date, and bolded headings released.

Our *in camera* review of the document confirms that it is predecisional for the purposes of the deliberative process privilege. Although it is dated after the November 1997 CIA animation, it was clearly prepared for the specific purpose of aiding the agency in its determination of the likely flight path of the aircraft following the explosion, a determination central to the CIA’s task of explaining what the eyewitnesses actually saw. Although the document discusses prior CIA estimates of the aircraft’s flight path, it also reviews those estimates and makes recommendations.

[17] The document is also “deliberative.” It exposes in detail the thought processes of the CIA analysts involved in calculating the simulated flight path, as well as language reflecting their decisionmaking process. We agree with the district court that releasing this record would discourage the type of candid discussion necessary for effective formulation of agency decisions, *see Assembly of Cal.*, 968 F.2d at 921, and conclude that the document was properly withheld pursuant to Exemption 5.

b. Record 28

The second document (“Record 28”), titled “Analysis of Radar Tracking,” is a seventeen-page “[d]raft report concerning preliminary analysis and conclusions regarding radar tracking of TWA Flight 800.” This document also is dated March 1998. Handwriting on the document’s first page reads “Draft” and “shown to NTSB but never finalized.” As the dis-

trict court's description notes, the document "contains conclusions and thoughts of CIA analysts concerning the viability and accuracy of certain radar data, the application of such data in determining the flight path of Flight 800, the problems with certain data and the thought processes of individuals who analyzed the data." The district court ordered the government to disclose the document's title, date, bolded section headings, one figure, and the document's appendix, which contains the radar readings on which the document's analysis is based. We agree, after reviewing the withheld portions of the record, that they are both predecisional and deliberative.

[18] The district court did order the agency to release the raw data used in the analysis, which was contained in the document's appendix. The remainder of the document contains the CIA analysts' evaluation of that data, their calculations, and their thought processes. As with Record 27, we agree that release of the document would expose the agency's internal deliberations in such a way that would discourage candid discussion and effective decisionmaking. We therefore conclude that the agency properly withheld this document under the Exemption 5 deliberative process privilege.

c. Record 43

The third document ("Record 43") is a five-page draft document concerning the CIA's analysis of eyewitness reports about the crash. A cover page preceding the document describes it as a "response to allegations of SA [Name] regarding C.I.A. analysis." The document discusses the CIA's assessment of individual eyewitness reports. Handwritten comments and edits appear on each page of the document in different handwriting styles. The district court upheld the withholding of this document in its entirety.

The document is not dated, and its contents do not clearly indicate whether it was created before or after the November 1997 CIA animation. In either case, we are persuaded that the

document is predecisional. Each page of the document is labeled “draft,” and several blanks appear in the text where data or other information would likely be added. Moreover, the document is a response to one person’s criticisms of the CIA’s analysis of witness statements, suggesting that it was part of an ongoing process of refining the agency’s ultimate conclusions about what the witnesses saw. This conclusion is bolstered by discussions of previous “drafts” of the CIA’s conclusion and by the absence of any reference to a final version or to the termination of the CIA’s investigation into the matter.

[19] Moreover, the record is clearly deliberative. Aside from the text of the draft itself—which discusses the CIA analysts’ impressions of witness statements and the agency’s take on the importance and significance of certain witnesses—the handwritten comments on the document, in the words of the district court, “unquestionably are part of a give-and-take exchange.” We conclude that the document appropriately falls within Exemption 5 and was properly withheld in its entirety.

In sum, we hold that the withheld portions of each of the three challenged documents properly fall within the scope of Exemption 5.

C. Computer Simulation Inputs

Lahr challenges several of the district court’s rulings regarding the computer simulations run by the agencies. We begin with some background to facilitate an understanding of what is and what is not at issue with regard to those simulations.

The agencies used several computer simulation programs in their investigation of the crash. The CIA used a program created by the National Security Agency (“NSA”). An NTSB employee, Dennis Crider, wrote his own software program. The NTSB also used two programs called BREAKUP and

BALLISTIC. The agencies' use of these programs resulted in two types of potentially discoverable information: the software programs themselves and the inputs entered into the programs by the agencies.

As to the first category—the programs themselves—there is no dispute on appeal between the parties. The district court held that the NSA's computer program fell under an exemption, and Lahr does not challenge that conclusion, at least with respect to the software itself. The district court ordered the NTSB to disclose the Crider program, and the agency does not appeal this ruling. Finally, the agency does not contest the district court's order directing the NTSB to search for the BALLISTIC and BREAKUP programs and disclose them, if found, subject to any applicable FOIA exemptions.

The only dispute about the computer simulation programs arises from the nondisclosure of certain of the inputs into these software programs. We discuss below the relevant inputs with respect to each program.

1. NSA Program

The CIA withheld the NSA program, citing FOIA Exemption 3, which exempts from disclosure matters "specifically exempted from disclosure by statute," 5 U.S.C. § 552(b)(3), and pointing to the National Security Agency Act of 1959.¹⁸ Lahr concedes that the NSA program itself falls within this exemption, but argues on appeal that the data inputs are segre-

¹⁸Specifically, the CIA cited section 6(a), which provides, in relevant part:

"[N]othing in this Act or any other law . . . shall be construed to require the disclosure of the organization or any function of the National Security Agency, [or] any information with respect to the activities thereof" National Security Agency Act of 1959, Pub. L. No. 86-36, § 6(a), 73 Stat. 63, 64 (codified as amended at 50 U.S.C. § 402 note).

gable and should be disclosed. The district court concluded that Exemption 3 was “applicable to the software in its entirety.” It is not entirely clear, however, whether this pronouncement included what Lahr refers to as the programs inputs, but the government has not released any of these inputs.

Under Exemption 3 and the NSA statute, information is properly withheld if the agency “describe[s] the intelligence activity involved, and . . . show[s] why disclosure of requested materials could reveal the nature of that activity.” *Hayden v. Nat'l Sec. Agency/Cent. Sec. Serv.*, 608 F.2d 1381, 1391 (D.C. Cir. 1979). The agency need not make a “specific showing of potential harm to national security” because “Congress has already, in enacting the statute, decided that disclosure of NSA activities is potentially harmful.” *Id.* at 1390.

The CIA submitted an initial affidavit from a senior NSA official stating that “release of the computer program could expose how the U.S. Government analyzes the performance characteristics of foreign weapons systems that are aerodynamic or ballistic.” The district court found this description wanting and ordered an *in camera* affidavit. After reviewing that *in camera* submission, the district court concluded that the affidavit sufficiently described how the program, “a unique tool for foreign weapons system analysis,” could harm the nation if disclosed. The district court then concluded that Exemption 3 is applicable.

[20] After reviewing the NSA’s affidavit *in camera*, we agree with the district court. The affidavit states that the program is used to analyze foreign weapons, and outlines specific reasons why release of the program, including the data inputs, would put the agency’s sources and methods at risk. We hold that the affidavit offers a sufficient explanation. The program and the inputs therefore fall within Exemption 3 and were properly withheld.

2. Crider Program

As noted, the district court ordered disclosure of the software for the Crider program, finding that the program itself was not deliberative and therefore did not properly fall within Exemption 5. Lahr contests the district court's conclusion that the simulation inputs did fall within Exemption 5.¹⁹ On appeal, Lahr's sole argument is that a government misconduct exception bars the applicability of Exemption 5. As with the other documents withheld under the deliberative process privilege, we hold that Lahr waived the argument by not raising it before the district court. We therefore affirm the district court's conclusion that the inputs properly fell within Exemption 5.

3. BALLISTIC and BREAKUP Programs

Lahr made two kinds of requests relating to the BALLISTIC and BREAKUP programs. First, he sought the programs themselves. Second, he requested “[a]ll records of the formulas and data entered into the computer simulations regarding the NTSB's zoom-climb conclusion.” The district court ordered the government to search for and disclose, if found, the BALLISTIC and BREAKUP programs, subject to any applicable exemptions. The district court also ordered the government to review its records to locate data inputs for the BREAKUP program and disclose that information, if found. The government appeals none of these orders.

The district court also found, however, that the BALLISTIC program, unlike BREAKUP, was “not used in any manner in connection with the ‘zoom-climb conclusion,’ ” and

¹⁹The district court does not expressly state that it found the simulation inputs to be deliberative, but it is clear that it so held from the discussion as a whole. Lahr concedes as much in his reply brief, stating that “[t]he district court held that the simulation inputs were privileged as deliberative,” and does not challenge the “deliberative” classification on appeal.

thus held that the data inputs for that program did not fall within the scope of Lahr's request. Lahr appeals this ruling, arguing that the "flight-path of the debris descending"—which he contends the BALLISTIC program modeled—is "inextricably a part of the government's theory that two-thirds of the aircraft ascended."

The government's declarant stated that the BREAKUP and BALLISTIC programs were not a part of the simulation program for the main wreckage of the aircraft, which modeled the ascent of the aircraft after the separation of the nose section. Instead, these programs were used for determination of the trajectory of certain pieces of the aircraft other than the main section. The declaration provides additional detail for the BREAKUP program, indicating that it was used to determine the "timing of the nose separating from the aircraft." On that basis, the district court concluded that the BREAKUP program was in fact relevant to the zoom-climb conclusion. Importantly, it was the *timing* of the nose separation, not the trajectory of certain pieces of the aircraft, that the district court found related to the zoom-climb theory. This conclusion makes sense, given that the zoom-climb thesis centers on the upward trajectory of the main body of the aircraft following the nose separation and has little to do with other pieces of the plane.

[21] The district court also determined, on the other hand, that the government had demonstrated that the BALLISTIC program was not used in connection with the zoom-climb conclusion. The government's declaration supports this conclusion. It states that the only way in which these programs were relevant to the flight-path simulation was by providing the timing point at which the nose separation occurred. According to the declaration, this timing information was obtained solely from the BREAKUP program. In light of this evidence, we cannot conclude that the district court's finding that the BALLISTIC program did not contribute to the zoom-climb theory was clearly erroneous. We therefore affirm the

district court’s conclusion that the data inputs to the BALLISTIC program were not responsive to Lahr’s request.

D. Adequacy of Search

FOIA requires an agency responding to a request to “demonstrate that it has conducted a search reasonably calculated to uncover all relevant documents.” *Zemansky v. EPA*, 767 F.2d 569, 571 (9th Cir. 1985) (internal quotation marks omitted). This showing may be made by “reasonably detailed, nonconclusory affidavits submitted in good faith.” *Id.* (internal quotation marks omitted).

The NTSB submitted detailed declarations describing its search, which involved a search of the public docket, the NTSB’s accident investigation files, and the paper records and computer systems of employees responsible for the simulations and animations of the flight path and for the earlier Trajectory Study. The CIA submitted a declaration explaining its search, which included a search of automated records and a manual search of individual analyst files, local databases, email, and desk files. The search was focused on the Directorate of Intelligence, the CIA component determined to be reasonably likely to have records responsive to Lahr’s request.

Lahr argues that the government’s searches were inadequate, contending that several produced documents prove the existence of additional documents that the agencies failed to produce or to describe in the government’s *Vaughn* index.²⁰ Lahr cites fourteen documents he claims contain references to or suggestions of other documents that should have been produced. These references and suggestions fall roughly into two

²⁰As described in the next section, the government must submit an affidavit pursuant to *Vaughn*, 484 F.2d 820, identifying the documents withheld, the FOIA exemptions claimed, and a particularized explanation of why each document falls within the claimed exemption. *Lion Raisins v. U.S. Dep’t of Agric.*, 354 F.3d 1072, 1082 (9th Cir. 2004).

categories. In the first category, Lahr points to graphs or charts (some of which are handwritten) that attempt to map the aircraft's trajectory, and he argues that the government must identify the source of the data used to create them. In the second category, Lahr points to references to other specific documents. For instance, the CIA disclosed a redacted letter to Boeing requesting certain "input variables"; Lahr claims that Boeing's response to this letter was neither disclosed nor identified. In another example, pointing to a fax cover sheet that references attached documents, Lahr complains that the government failed to disclose these attachments or describe them in the *Vaughn* index.

In evaluating the sufficiency of an agency's search, "the issue to be resolved is not whether there might exist any other documents possibly responsive to the request, but rather whether the *search* for those documents was *adequate*." *Zemansky*, 767 F.2d at 571 (internal quotation marks omitted); *see also Iturralde v. Comptroller of the Currency*, 315 F.3d 311, 315 (D.C. Cir. 2003) ("[I]t is long settled that the failure of an agency to turn up one specific document in its search does not alone render a search inadequate."). For example, in *Miller v. U.S. Department of State*, 779 F.2d 1378 (8th Cir. 1985), Miller attacked the agency's search by asserting that he had "repeatedly identified for the State Department particular documents which were internally referred to in documents released to him. He argues that the fact that these referenced documents were not sent to him indicates an inadequate search on the part of the State Department." *Id.* at 1384. The Eighth Circuit rejected this challenge:

The fact that a document once existed does not mean that it now exists; nor does the fact that an agency created a document necessarily imply that the agency has retained it. Thus, the Department is not required by the Act to account for documents which the requester has in some way identified if it has

made a diligent search for those documents in the places in which they might be expected to be found.

Id. at 1385; *see also Maynard*, 986 F.2d at 563-64; *SafeCard Servs., Inc. v. SEC*, 926 F.2d 1197, 1201 (D.C. Cir. 1991).

Here, with respect to the data referenced in some of the documents, Lahr only speculates that the agencies have retained records of the data points used to create the various charts. Lahr presents no persuasive evidence however that these records now exist and either evaded discovery during the agencies' searches or were purposely and improperly withheld. The government's submissions describe in sufficient detail the agencies' search for records such as the data used to produce these charts. We are satisfied that the searches were reasonably calculated to uncover responsive documents.²¹ The district court found no evidence of either agency's bad faith in conducting their searches, and, aside from his general allegations of government cover-up, Lahr presents no evidence that would undermine the district court's conclusion.

Lahr's claim that the government's searches were inadequate because they failed to uncover the records in the second category—documents referenced in produced records—also fails for similar reasons. As an initial matter, we note that there is a mistake or miscommunication with respect to at

²¹For instance, the NTSB's declaration stated that one person, Douglas Crider, was "responsible for deriving the calculations and/or computations of the flight path for TWA flight 800," and "was the only NTSB staff [member] who created a computer simulation of the flight path of the accident airplane." Crider's declaration describes in detail his several searches for records responsive to Lahr's requests. Douglass Brazy "was the only NTSB staff [member] responsible for creating the animations of the flight path of TWA flight 800 shown at the public hearing on December 8, 1997." In response to Lahr's requests, Brazy "searched [his] office[] and the computer systems used to create the animations." The CIA's declaration similarly detailed its search process, which involved supplementing the search of the automated records system with a manual search after the automated search turned up no responsive records.

least one of the documents allegedly not produced by the CIA.²² In other instances, it is not clear whether the statements cited by Lahr actually refer to other documents that ever existed, let alone existed at the time of the agencies' searches.²³ With respect to the remaining few documents, Lahr's contentions are too speculative to support the conclusion that the agencies' searches were inadequate. Even if the documents did exist when the agencies conducted their searches, the failure to produce or identify a few isolated documents cannot by itself prove the searches inadequate.²⁴ Moreover, Lahr makes no specific allegations that the government's searches were fraudulent or that it purposely withheld responsive documents.

Finally, Lahr argues that the CIA should have disclosed or identified in the *Vaughn* index a report on TWA Flight 800 by CIA analyst Randolph Tauss, which was the subject of a 2003 *Washington Post* article (the "Tauss Report"). Lahr's argument fails for two reasons. First, as the district court found, the document is not responsive to Lahr's FOIA request. Lahr requested "all records upon which this publicly released aircraft flight path climb conclusion [as set forth in the 1997 video] was based." The document is a narrative

²²In this instance, it appears that the agency either did or intended to produce the document Lahr maintains was not disclosed. Lahr points to icons indicating Microsoft Word documents attached to an email with the subject "Final Reports to the FBI," but represents that the attachments were not disclosed or identified. Yet, according to the *Vaughn* index for this document, the CIA either did or intended to produce the attached documents. This document thus offers no support for the claim that the government's search was inadequate.

²³For example, Lahr complains that one document appears to be missing pages because it contains a "Figure 1" and a "Figure 8" but no Figures 2 through 7. It is possible that pages are missing, but it is more probable that the document, which is unsigned and undated, was produced in draft form, so that the allegedly missing figures did not yet exist. The document includes place holders for future figures, "figure[s] x and x."

²⁴The government, of course, must produce responsive documents *actually uncovered* in a search, unless one of FOIA's exemptions applies.

recounting of the CIA's participation in the investigation of the crash, including the use of eyewitness reports. Although undated, it is clearly a retrospective look at the CIA's investigation, not a record on which the CIA's conclusion of the flight path was based. Second, a redacted version of the document now appears in the public record. The names of CIA analysts are redacted, but the district court held that these names were properly withheld under Exemption 3, and Lahr has not challenged this ruling on appeal. As Lahr could not get any more of this document than is now available to him, the issue is moot.

[22] In sum, we hold that the agencies' declarations are sufficient to support the conclusion that their searches were reasonably calculated to uncover responsive records and were therefore adequate for the purposes of FOIA.

E. Vaughn Index

Government agencies must submit an affidavit pursuant to *Vaughn*, 484 F.2d 820, "identifying the documents withheld, the FOIA exemptions claimed, and a particularized explanation of why each document falls within the claimed exemption." *Lion Raisins*, 354 F.3d at 1082. The *Vaughn* index "must be detailed enough for the district court to make a *de novo* assessment of the government's claim of exemption." *Id.* (internal quotation marks omitted). Lahr makes several challenges to the sufficiency of the government's *Vaughn* index. "We review *de novo* whether the [agency]'s indices and supporting declarations constitute a sufficient *Vaughn* index." *Citizens Comm'n on Human Rights v. FDA*, 45 F.3d 1325, 1328 (9th Cir. 1995).

1. Correlation Records

[23] Lahr first contends that the government's *Vaughn* index fails to identify records "correlating" various information, such as radar, flight data recorder, and cockpit voice

recorder data, with its zoom-climb conclusion. The NTSB’s *Vaughn* index does specifically address records of the correlation of the zoom-climb calculations with these data, referring Lahr to responsive records available in the public docket or released in response to the FOIA requests, or stating that responsive documents were withheld under Exemption 5. Lahr maintains that the government’s “*Vaughn* index should identify the records of the correlations it claims to have performed.” We cannot discern from this articulation what additional clarification about the available information Lahr seeks; most likely, he is complaining not about the *Vaughn* index, but about the NTSB’s failure to release additional records of this variety. In any event, we conclude that the government’s *Vaughn* index sufficiently identifies correlation records.

2. CIA Simulation

Lahr next contends that the government’s *Vaughn* index fails to identify the dates on which the government ran the NSA simulation program and whether it was the CIA or the NSA that actually ran it, arguing that he made a specific request for that information.²⁵ Specifically, Lahr claims that the CIA produced two printouts of the simulation with allegedly different results—one a set of graphical charts bearing the date “5/16/97” and the other, data tables bearing two dates, “3/98” and “3/15/04.” Lahr faults the government’s *Vaughn* index for failing to state whether both records were generated from the NSA’s simulation program.

[24] The documents produced and the *Vaughn* index sufficiently respond to Lahr’s request. As to the first document, there is nothing to suggest that the graphical charts were not created on the date specified. According to the government’s

²⁵Lahr contends that the relevant request was for “all records reflecting whether or not the NTSB conducted the computer simulations in-house, and, if not, all records of when, where, and by whom the computer simulations were performed.”

Vaughn index, an email accompanying the charts identifies the CIA agents involved in creating the document, but their names have been redacted under Exemption 3, a redaction Lahr does not dispute. The government's description plainly states that the graphs are depictions of the results of certain aspects of the trajectory simulation program, and the email so confirms. As to the second, it is true that the document contains two handwritten dates, but the "3/98" date is preceded by "dated =," suggesting that the tables report data and results from the simulation run at that time.²⁶ The document also contains the redacted name of a CIA analyst involved in the simulation, as the *Vaughn* index indicates. The document explicitly says that the data tables are the product of the trajectory simulation program. Viewed together, the documents and the *Vaughn* index are sufficient to answer Lahr's challenge.

3. Affiants' Personal Knowledge

As a general matter, "[a]n affidavit from an agency employee responsible for supervising a FOIA search is all that is needed to satisfy" the personal knowledge requirement of Federal Rule of Civil Procedure 56(e). *Carney v. U.S. Dep't of Justice*, 19 F.3d 807, 814 (2d Cir. 1994); *see also Maynard*, 986 F.2d at 559-60. Lahr argues that, although agency affidavits under FOIA generally may be made based on information available to the affiant in her official capacity, here, because he has proven fraud, the CIA should be required to produce affidavits based only on personal knowledge. Lahr contends that the CIA omitted certain key documents in its submission to the district court and released documents using a confusing numbering system that complicated his efforts at organizing the CIA's responses.

²⁶The computer printout itself contains the "3/15/04" date that is also handwritten on the front page of the document. The text of the printout, however, also reads, "Boeing proprietary information removed." In context, this most likely indicates that the printout was reproduced at this later date, in response to Lahr's FOIA request.

Lahr properly points out that an agency's proven misconduct can undermine the presumed veracity of its affidavits. *See, e.g., Jones v. FBI*, 41 F.3d 238, 243, 249 (6th Cir. 1994). He points to no authority, however, that proof of fraud obviates the general rule applicable in FOIA cases that an affiant need not have personally conducted the search. Furthermore, Lahr's complaints about the CIA's handling of his FOIA requests might suggest some bureaucratic mismanagement, but they do not prove fraud in that regard.

[25] We hold that the government's *Vaughn* index was sufficient.

* * *

For the foregoing reasons, the district court's decision is AFFIRMED in part, REVERSED in part, and REMANDED for proceedings consistent with this opinion.²⁷

²⁷The district court concluded that, as it ordered production of twenty-six out of thirty-two contested records, Lahr "substantially prevailed" within the meaning of the statute. Our decision reversing the district court's order that the government release names redacted in eleven documents requires that the district court reconsider its conclusion that Lahr "substantially prevailed." Our reversal on these eleven documents also could alter the district court's assessment of Lahr's entitlement to fees and the calculation of any fees awarded. We therefore remand for reconsideration of the fee award.