

2. CAFOs are industrial facilities that confine hundreds, thousands, or even millions of animals. Together, these animals generate a staggering quantity of urine and feces, which—in turn—release toxic gases. Workers and nearby community-members exposed to these gases can suffer a range of negative health consequences, including death.

3. In 2008, EPA issued a final rule exempting most CAFOs from the requirement to notify authorities about dangerous releases of toxic gases under EPCRA and a related law: the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), *id.* §§ 9601 *et seq.* See EPA, *CERCLA/EPCRA Administrative Reporting Exemption for Air Releases of Hazardous Substances from Animal Waste at Farms*, 73 Fed. Reg. 76,948 (Dec. 18, 2008) (“2008 Rule”).

4. In April 2017, the U.S. Court of Appeals for the District of Columbia Circuit vacated this rule, concluding that EPA lacked authority to create exemptions where Congress had unambiguously mandated reporting. See *Waterkeeper All. v. EPA*, 853 F.3d 527 (D.C. Cir. 2017).

5. Just six months after the D.C. Circuit’s ruling, in October 2017, EPA published new guidance purporting to exempt all “farms,” including CAFOs, from reporting dangerous releases of toxic gases under EPCRA. See EPA, *Does EPA Interpret EPCRA Section 304 to Require Farms to Report Releases from Animal Waste?* (Oct. 25, 2017) (“October Guidance”), attached as Exhibit 1, Att. 2. EPA grounded this guidance in a statutory interpretation long championed by the agriculture industry, but previously rejected by EPA.

6. On or about April 27, 2018, EPA revised and expanded upon its October Guidance, articulating yet another basis for exempting CAFOs from EPCRA reporting. See EPA, *CERCLA and EPCRA Reporting Requirements for Air Releases of Hazardous Substances from Animal Waste at Farms* (last accessed Apr. 27, 2018) (“April Guidance” or, together with

the October Guidance, “EPA Guidance”), attached as Exhibit 1, Att. 1.

7. That same day, Plaintiffs submitted a FOIA request to EPA, seeking records pertaining to the Agency’s decision to propose, draft, and adopt the EPA Guidance. *See* Letter from Jonathan J. Smith, Senior Associate Attorney, Earthjustice, to Nat’l Freedom of Info. Officer, EPA (Apr. 27, 2018) (“FOIA Request” or “Request”), attached as Exhibit 1.

8. EPA’s response to the FOIA Request was due no later than May 25, 2018. Yet May 2018 has come and gone with no response from EPA. Plaintiffs are entitled to immediate release of the requested records.

PARTIES

9. Plaintiff WATERKEEPER ALLIANCE (“Waterkeeper”) is a nonprofit organization that fights for every community’s right to drinkable, fishable, swimmable water. Through its “Pure Farms, Pure Waters” campaign, Waterkeeper focuses specifically on calling attention to destructive and polluting practices at CAFOs, ensuring that CAFOs comply with federal law, and supporting independent and responsible family farms. Waterkeeper uses FOIA to obtain information about government operations and activities that could enable or excuse agricultural pollution, thereby threatening public health and the environment. Waterkeeper disseminates this information to the public—including its 11,500 individual members, as well as its 153 U.S. Waterkeeper member organizations and 22 U.S. Waterkeeper affiliate organizations, which collectively have tens of thousands of individual members—through media campaigns, internet advocacy, and other effective communications strategies. As the largest and fastest-growing nonprofit focused on clean water, Waterkeeper frequently shares information and provides commentary at conferences, on radio and television, and in major newspapers nationwide.

10. Plaintiff SIERRA CLUB is the nation’s oldest grassroots environmental organization. Since 1892, Sierra Club has worked to explore, enjoy, and protect the wild places of the Earth; to practice and promote the responsible use of the Earth’s ecosystems and resources; and to educate and enlist humanity to protect and restore the quality of the natural and human environments. Sierra Club routinely uses FOIA to obtain records from federal agencies. Sierra Club’s legal and policy experts analyze these records to keep abreast of information pertaining to natural resources and the environment. Sierra Club regularly conveys important information to its members and the public through publications and press releases—and by publicly releasing records obtained through FOIA.

11. Defendant UNITED STATES ENVIRONMENTAL PROTECTION AGENCY is a federal agency as defined in 5 U.S.C. §§ 551(1) and 552(f)(1). Congress has charged EPA with protecting human health and the environment by administering a number of federal laws, including CERCLA and EPCRA. On information and belief, EPA has possession or control of the records Plaintiffs seek.

JURISDICTION AND VENUE

12. This Court has jurisdiction over this action pursuant to 5 U.S.C. § 552(a)(4)(B) (FOIA) and 28 U.S.C. § 1331 (Federal question).

13. Venue is proper in the District of Columbia pursuant to 5 U.S.C. § 552(a)(4)(B).

FACTUAL BACKGROUND

A. Toxic Emissions From CAFOs

14. In many parts of the country, bucolic family farms have given way to CAFOs, industrial facilities that confine hundreds, thousands, or millions of animals used for the production of meat, milk, and eggs. *See* 40 C.F.R. § 122.23(b)(1) (defining an “animal feeding

operation” or “AFO” as “a lot or facility . . . where . . . [a]nimals . . . have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and . . . [c]rops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility”); *id.* § 122.23(b)(6) (defining a “medium CAFO” as an AFO that confines a certain number of animals—for example, 200 to 699 dairy cows, 750 to 2,499 swine each weighing 55 pounds or more, or 16,500 to 54,999 turkeys); *id.* § 122.23(b)(4) (defining a “large CAFO” as an AFO that confines at least a certain number of animals—for example, 700 dairy cows, 2,500 swine each weighing 55 pounds or more, or 55,000 turkeys).

15. As EPA’s Office of Inspector General recently acknowledged, “[f]or more than two decades, movements to improve profitability within the agriculture industry have resulted in larger AFO facilities that often are geographically concentrated.” *See* EPA, Office of Inspector General, Report No. 17-P-0396, *Improving Air Quality: Eleven Years after Agreement, EPA Has Not Developed Reliable Emission Estimation Methods to Determine Whether Animal Feeding Operations Comply with Clean Air Act and Other Statutes* (Sept. 19, 2017), https://www.epa.gov/sites/production/files/2017-09/documents/epaog_20170919-17-p-0396.pdf.

16. CAFOs generate staggering quantities of waste. For example, in North Carolina, CAFOs confine more than 9.7 million pigs. N.C. Dep’t. of Env’tl. Quality, *List of Permitted Animal Facilities* (Jan. 26, 2018), https://files.nc.gov/ncdeq/List_ofPermitted_Animal_Facilities%201-26-2018.xls?SdODtHdc46AmsgSZ0z_o0dLzRFbNgZs (recording the number and type of swine allowed at CAFOs in North Carolina). Together, these animals produce over 9.5 billion gallons of urine and feces each year—that is, *more than 500 times* as much waste as is generated by the entire population of Washington, D.C. Env’tl. Working Group, *Exposing Fields*

of Filth: Data and Methodology (June 21, 2016), <https://www.ewg.org/research/exposing-fields-filth/data-and-methodology#.W5kdTaZKiUI> (listing the annual amount of manure generated by each swine type); EPA, *Risk Assessment Evaluation for Concentrated Animal Feeding Operations* (May 2004), <https://nepis.epa.gov/Exe/ZyPDF.cgi/901V0100.PDF?Dockey=901V0100.PDF> (estimating that a 150-pound person produces an average of 0.5 pounds of fecal matter each day); U.S. Census Bureau, *QuickFacts: District of Columbia* (last accessed Sept. 12, 2018), <https://www.census.gov/quickfacts/fact/table/dc/PST045217> (In 2017, the population of Washington, D.C. was 693,972 people). Unlike cities, however, CAFOs do not treat or disinfect waste prior to disposal. Instead, many CAFOs store urine and feces in vast uncovered pits, before applying it directly to land. As this waste decomposes, it emits toxic gases—including ammonia and hydrogen sulfide. Carrie Hribar, *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities*, Nat'l Ass'n of Local Boards of Health (2010), https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf.

17. Toxic gases emitted from CAFOs pose a serious health risk to workers and surrounding communities. Exposure to ammonia can trigger respiratory problems and irritation of the eyes and nose. In extreme circumstances, ammonia exposure can result in permanent scarring of the respiratory tract or death. Exposure to hydrogen sulfide can trigger headaches, nausea, and irritation of the eyes and skin. At high levels, hydrogen sulfide exposure can cause loss of consciousness or death. Chronic low-level exposure can interfere with balance, eyesight, hearing, mood, memory, and intellectual function.

18. As the D.C. Circuit recently recognized, “[this] risk isn’t just theoretical.” *Waterkeeper All.*, 853 F.3d at 536. For example, CAFO workers “have become seriously ill and even died as a result of pit agitation”—that is, the practice of stirring animal waste in a storage

pit to combine liquids and solids, a prerequisite to land application. *Id.*

19. Community-members living within two miles of CAFOs are especially likely to suffer a range of negative health consequences, including headaches, nausea, shortness of breath, runny noses, excessive coughing, and diarrhea. *See, e.g.,* James A. Merchant et al., *Asthma and Farm Exposures in a Cohort of Rural Iowa Children*, 113 *Envtl. Health Perspectives* 350 (2005); Steve Wing and Suzanne Wolf, *Intensive Livestock Operations, Health and Quality of Life among Eastern North Carolina Residents*, 108 *Envtl. Health Perspectives* 233 (2000).

B. Statutory and Regulatory Requirements to Report Dangerous Releases of Toxic Gases

20. “Congress has long sought to ensure that federal, state, and local authorities can adequately respond when hazardous chemicals threaten public safety or the environment.” *Waterkeeper All.*, 853 F.3d at 530–31. Accordingly, both CERCLA and EPCRA require facilities to notify authorities about dangerous releases.

21. Under CERCLA, “[a]ny person in charge of a . . . facility shall, as soon as he has knowledge of any [unpermitted] release . . . of a hazardous substance from such . . . facility in quantities equal to or greater than [certain regulatory thresholds], immediately notify the National Response Center.” 42 U.S.C. § 9603(a).

22. EPCRA mandates that any facility that produces, uses, or stores a “hazardous chemical” report any unpermitted release of an “extremely hazardous substance” exceeding a certain regulatory threshold to “the community emergency coordinator for the local emergency planning committees . . . for any area likely to be affected by the release and to the State emergency planning commission of any State likely to be affected by the release,” provided that such release either requires notification under CERCLA or occurs in a manner that would require

notification under CERCLA. *Id.* § 11004(a), (b). These reports must “be made available to the general public.” *Id.* § 11044(a).

23. EPCRA generally incorporates the definition of “hazardous chemical” established by the Occupational Safety and Health Administration (“OSHA”). *See* 42 U.S.C. § 11021(e). However, “[f]or the purpose of [42 U.S.C. § 11021],” a provision of EPCRA that directs facilities to submit information about hazardous chemicals to state and local authorities, Congress amended OSHA’s regulatory definition to exclude “[a]ny substance to the extent it is used in routine agricultural operations.” *Id.* § 11021(e)(5).

24. EPA has designated ammonia and hydrogen sulfide as “hazardous substances” and “extremely hazardous substances” under CERCLA and EPCRA, respectively. *See* 40 C.F.R. § 302.4(a) (CERCLA); *id.* § 355 App. A (EPCRA). The reporting threshold or “reportable quantity” for both ammonia and hydrogen sulfide is 100 pounds per day under both statutes. *Id.*

25. Large CAFOs routinely release reportable quantities of both ammonia and hydrogen sulfide. For example, CAFOs with at least 100 dairy cows emit 100 pounds of ammonia every day. Rick Stowell and Rick Koelsch, *Ammonia Emissions Estimator (Daily Version)*, U. of Neb. (Feb. 23, 2009), <https://water.unl.edu/documents/Ammonia%20Emissions%20Estimator%20-%20Daily%20VersionV03.pdf>.

C. EPA’s Efforts to Exempt CAFOs from Reporting Requirements

26. In 2008, EPA issued a final rule exempting most CAFOs from the requirement to report air emissions of hazardous substances from manure, including ammonia and hydrogen sulfide, under CERCLA and EPCRA. *See* 2008 Rule, 73 Fed. Reg. at 76,948. EPA concluded that reporting was “unnecessary because, in most cases, a federal response is impractical and

unlikely (*i.e.*, [EPA] would not respond to them since there is no reasonable approach for the response).” *Id.* at 76,956.

27. In April 2017, the D.C. Circuit vacated this rule. *See Waterkeeper All.*, 853 F.3d at 537-38. The court refused to accept EPA’s justification for exempting most CAFOs from the requirement to report dangerous air emissions under EPCRA, in part, because the record showed that reporting could offer “real benefits” to workers and communities. *Id.* at 537 (explaining that state and local authorities could use information obtained through EPCRA “to narrow an investigation when they get a phone call reporting a suspicious smell or similarly vague news of possibly hazardous leaks”).

28. On October 25, 2017, approximately six months after the D.C. Circuit concluded that EPA *lacked* authority to exempt CAFOs from reporting dangerous air emissions under EPCRA, EPA published its October Guidance exempting all “farms,” including CAFOs, from reporting dangerous air emissions under EPCRA. *See* Ex. 1, Att. 2. Instead of contending that reporting was unnecessary (as it had in the 2008 Rule), EPA now argued that “Congress did not intend to impose EPCRA reporting requirements on farms engaged in routine agricultural operations.” *Id.*

29. Prior to October 2017, EPA had expressly rejected this interpretation of EPCRA’s “routine agricultural operations” provision.

30. By contrast, the agriculture industry has long championed this interpretation.

31. Although the October Guidance took effect immediately, EPA expressed its intention “to conduct a rulemaking on the interpretation of ‘used in routine agricultural operations’ as it pertains to EPCRA reporting requirements.” *Id.*

32. In March 2018, Congress enacted the Consolidated Appropriations Act, 2018.

See Pub. L. 115-141, 132 Stat. 348 (2018). A title of this Act—itsself entitled the Fair Agricultural Reporting Method Act or FARM Act—amended CERCLA to eliminate reporting requirements for “air emissions from animal waste (including decomposing animal waste) at a farm.” *Id.* § 1102. The FARM Act did not alter reporting requirements under EPCRA.

33. On April 27, 2018, EPA revised and expanded upon its October Guidance to assert a new rationale for exempting all “farms,” including CAFOs, from reporting toxic air emissions under EPCRA. See EPA, *How Does the Fair Agricultural Reporting Method (FARM) Act Impact Reporting of Air Emissions from Animal Waste under CERCLA Section 103 and EPCRA Section 304?* (Apr. 27, 2018), https://www.epa.gov/sites/production/files/2018-04/documents/cercla_epcra_q_and_a_farm_act_4-28-18.pdf. Specifically, EPA concluded that because the FARM Act amended CERCLA to eliminate the requirement to report emissions “from animal waste *into the air*,” air emissions no longer occur in a manner that would require reporting under CERCLA, and thus these emissions do not trigger the requirement to report under EPCRA. *Id.*

34. EPA failed to reconcile this rationale with EPCRA’s statutory text or the FARM Act’s legislative history, both of which demonstrate Congress’s intent to mandate reporting under EPCRA even if CERCLA reporting is not required.

35. Although the revised guidance took effect immediately, EPA expressed its intention “to conduct a rulemaking to address the impact of the FARM Act on the reporting of air emissions from animal waste at farms under EPCRA.” *Id.*; see also Ex. 1, Att. 1 (explaining EPA will update its online resources to reflect its interpretation of EPCRA and the FARM Act).

LEGAL BACKGROUND

36. FOIA requires that “each agency . . . shall make . . . records promptly available to any person” upon receipt of a proper request, unless certain narrow exemptions to disclosure apply. 5 U.S.C. § 552(a)(3)(A).

37. Specifically, under FOIA and EPA’s implementing regulations, EPA must determine whether to comply with a properly submitted FOIA request within 20 business days of receipt and must immediately notify the requester of its determination, along with the underlying reasons. *Id.* § 552(a)(6)(A)(i); 40 C.F.R. § 2.104(a) (“EPA offices will respond to requests no later than 20 working days from the date the request is received.”). If the Agency determines not to comply with a properly submitted request, it must inform the requester of the right to appeal that adverse determination to the head of the Agency. 5 U.S.C. § 552(a)(6)(A)(i)(III)(aa).

38. In “unusual circumstances,” EPA may extend the 20-day deadline for responding to a FOIA request—for no more than ten additional business days—by written notice to the requester. *Id.* § 552(a)(6)(B)(i); *see id.* § 552(a)(6)(B)(iii) (defining “unusual circumstances”). This written notice must set forth the unusual circumstances justifying the extension and specify the date on which the Agency will determine whether to comply with the request. *Id.* § 552(a)(6)(B)(i); *see also* 40 C.F.R. § 2.104(d) (“When the statutory time limits for processing a request cannot be met because of ‘unusual circumstances,’ . . . and the time limits are extended on that basis, you will be notified in writing, as soon as practicable, of the unusual circumstances and of the date by which processing of the request should be completed.”).

39. If EPA fails to notify a FOIA requester before the statutory deadline of its determination about whether it will comply with a properly submitted request, the requester is deemed to have exhausted his or her administrative remedies and may immediately seek review

in an appropriate district court. 5 U.S.C. § 552(a)(6)(C)(i), (a)(4)(B); *see* 40 C.F.R. § 2.104(a) (“If EPA fails to respond to your request within the 20 working day period . . . you may seek judicial review to obtain the records without first making an administrative appeal.”). If the Agency is exercising due diligence in responding to the request and “exceptional circumstances” apply, the court may retain jurisdiction and allow the Agency additional time to respond. 5 U.S.C. § 552(a)(6)(C)(i). A delay resulting from a “predictable agency workload of [FOIA] requests” generally does not qualify as an exceptional circumstance. *Id.* § 552(a)(6)(C)(ii).

PLAINTIFFS’ FOIA REQUEST AND EPA’S FAILURE TO RESPOND

40. On April 27, 2018, Plaintiffs submitted the FOIA Request to EPA through the Agency’s “FOIAonline” application and by email. *See* Ex. 1 at 1. The Request sought “[a]ny and all records from January 21, 2017 to the present, related to the proposing, drafting or otherwise authorizing” of the EPA Guidance. *Id.* The Request also sought “[a]ny and all communications related to this EPA Guidance between EPA and any agricultural industry groups, lobbyists, or corporations, including but not limited to the following groups:

- a. The American Farm Bureau Federation
- b. The National Pork Producers Council
- c. National Chicken Council
- d. National Turkey Federation
- e. U.S. Poultry & Egg Association
- f. United Egg Producers
- g. National Cattleman’s Beef Association
- h. U.S. Farmers & Ranchers Alliance
- i. American Dairy Association
- j. National Milk Producers Federation
- k. Dairy Business Milk Marketing Cooperative
- l. North American Meat Institute
- m. The National Association of State Departments of Agriculture (‘NASDA’)
- n. National Council of Agricultural Employers (‘NCAE’)
- o. Animal Agriculture Alliance
- p. Oregonians for Food and Shelter
- q. State-based Farm Bureau associations
- r. State departments of agriculture

- s. Smithfield
- t. Cargill
- u. Perdue
- v. Tyson
- w. JBS
- x. Seaboard[.]

Id. at 1–2. To facilitate a prompt response from EPA, Plaintiffs proposed a number of search terms. *See id.* at 2. Plaintiffs also requested that EPA waive the search and production fees. *Id.* at 3–6.

41. EPA’s “FOIAonline” application automatically assigned the Request tracking number EPA-HQ-2018-007135. *See* E-mail from Jonathan J. Smith, Senior Associate Attorney, Earthjustice, to hq.foia@epa.gov (Apr. 27, 2018, 6:11 PM EST), attached as Exhibit 2.

42. On May 31, 2018, in response to Plaintiffs’ request for a fee waiver, EPA informed Plaintiffs’ counsel that the FOIA Request “does not reach the minimum billable amount [and] . . . [t]herefore, no charges are associated in processing [the Request].” *See* Letter from Larry F. Gottesman, Nat’l FOIA Officer, EPA, to Jonathan J. Smith, Senior Associate Attorney, Earthjustice (May 31, 2018), attached as Exhibit 3. In the same communication, EPA promised that “[t]he Office of Land and Emergency Management will be responding to your information request.” *Id.*

43. On June 1, 2018—24 working days after Plaintiffs submitted the FOIA Request and 4 working days after the expiration of the statutory deadline for EPA’s response—Plaintiffs’ counsel sent an e-mail to EPA inquiring about the status of the Request. *See* E-mail from Jonathan J. Smith, Earthjustice, to McLendon.wanda@Epa.gov, Gottesman.larry@Epa.gov, and Lewis.monica@Epa.gov (June 1, 2018, 10:30 AM EST), attached as Exhibit 4. To date, Plaintiffs have not received any response from EPA.

44. EPA’s response to Plaintiffs’ FOIA Request was due 20 working days after

receipt—that is, no later than May 25, 2018. To date, EPA has not notified Plaintiffs of its determination as to whether it intends to comply with the FOIA Request or of the reasons for that determination, and it has not yet released any responsive records. *See* FOIAonline, EPA-HQ-2018-007135 Request Details, <https://www.foiaonline.gov/foiaonline/action/public/submissionDetails?trackingNumber=EPA-HQ-2018-007135&type=request> (last visited Sept. 11, 2018) (indicating that the FOIA Request is at the “Assignment” stage and has not yet begun “Processing”), attached as Exhibit 5.

45. Plaintiffs reasonably believe that non-exempt records responsive to the FOIA Request could shed light on EPA’s decision to issue guidance exempting CAFOs from reporting dangerous emissions of toxic gases under EPCRA.

46. Plaintiffs also reasonably believe that EPA could soon begin a rulemaking process to finalize this guidance. *See, e.g.,* ¶¶ 31, 35, *supra*.

47. Accordingly, a court order requiring EPA to release the requested records within 20 days—the period of time Congress deemed generally sufficient for responding to requests under FOIA—is necessary to ensure that Plaintiffs have the opportunity to examine, analyze, and confer with the Agency regarding those records, so that Plaintiffs may rely on them in commenting on any forthcoming rulemaking formalizing the EPA Guidance.

CLAIM FOR RELIEF

1. Under FOIA, Plaintiffs have a statutory right to obtain all non-exempt records responsive to their Request.

2. EPA failed to respond to Plaintiffs’ Request within 20 days. To date, EPA has not notified Plaintiffs of its determination as to whether it intends to comply with Plaintiffs’ properly submitted FOIA Request, in violation of FOIA, 5 U.S.C. § 552(a)(6)(A)(i).

3. EPA failed to make all non-exempt responsive records promptly available to Plaintiffs, in violation of FOIA, 5 U.S.C. § 552(a)(3)(A).

REQUEST FOR RELIEF

Plaintiffs respectfully request that this Court enter an Order:

1. Declaring, pursuant to 28 U.S.C. § 2201, that EPA violated FOIA by failing to notify Plaintiffs of EPA's determination about whether to comply with Plaintiffs' properly submitted FOIA Request, along with the reasons for that determination, before the statutory deadline;

2. Declaring, pursuant to 28 U.S.C. § 2201, that EPA violated FOIA by failing to make the requested records promptly available to Plaintiffs;

3. Ordering EPA, pursuant to 5 U.S.C. § 552(a)(4)(B) and 28 U.S.C. § 2202, to release the requested records to Plaintiffs within 20 business days of the Court's Order;

4. Ordering EPA, pursuant to 5 U.S.C. § 552(a)(4)(B) and 28 U.S.C. § 2202, to produce an index identifying any responsive records or parts thereof that it decides to withhold from disclosure, along with the specific statutory exemption claimed;

5. Retaining jurisdiction over this case to rule on any assertion by EPA that certain responsive records are exempt from disclosure;

6. Awarding Plaintiffs their reasonable attorney fees and other litigation costs pursuant to 5 U.S.C. § 552(a)(4)(E)(i); and

7. Granting such other and further relief as the Court deems just and proper.

Respectfully submitted this 14th day of September 2018.

/s/ Carrie F. Apfel
CARRIE F. APFEL (DC Bar No. 974342)
Earthjustice
1625 Massachusetts Avenue, N.W., Suite 702

Washington, D.C. 20036
(202) 667-4500
capfel@earthjustice.org

ALEXIS ANDIMAN*
Earthjustice
48 Wall Street, 19th Floor
New York, NY 10005
(212) 845-7376
aandiman@earthjustice.org

* Application for admission *pro hac vice* to follow

Counsel for Plaintiffs