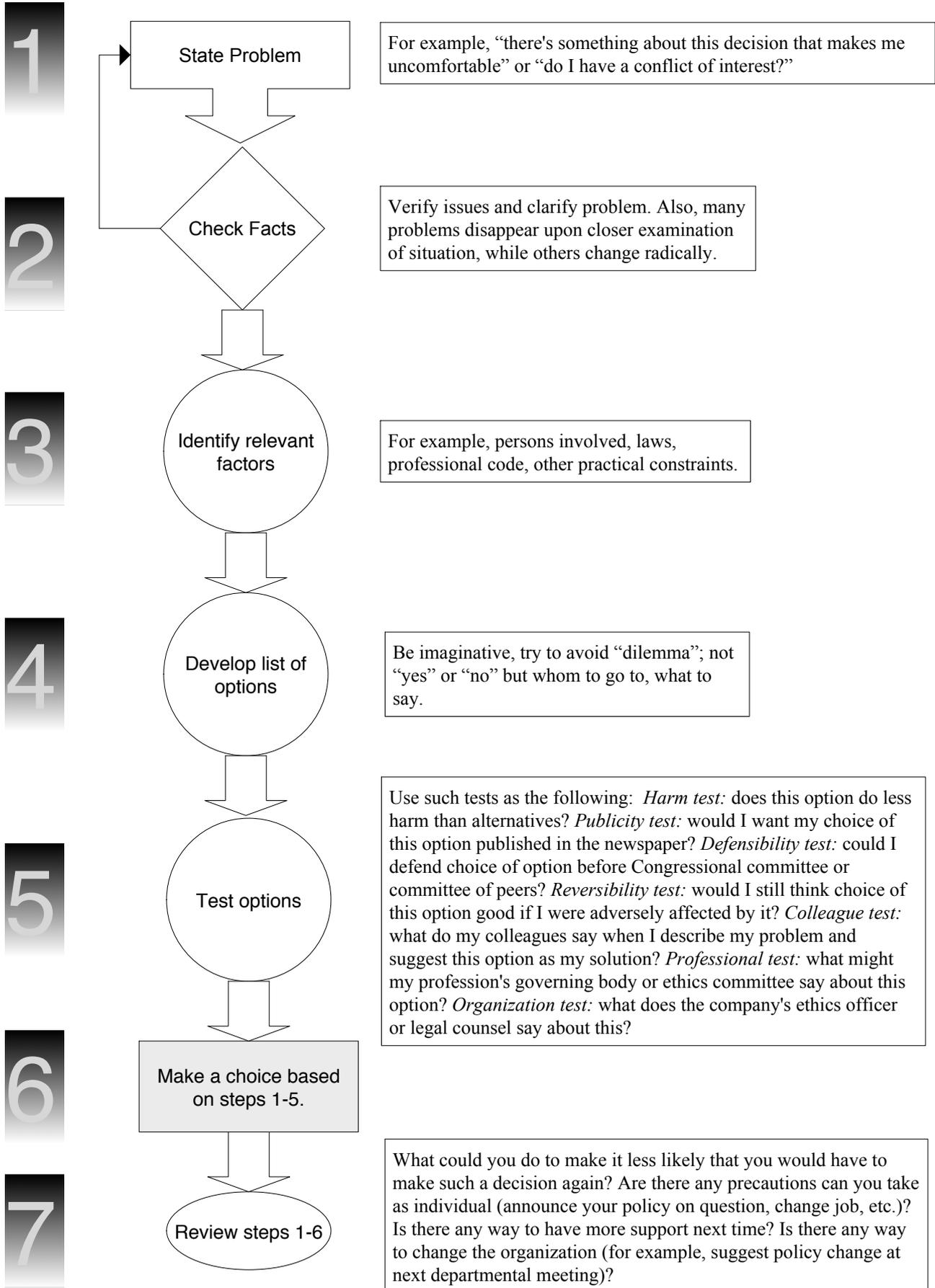


Seven Step Guide to Ethical Decision Making





Case study: Tidal Wetland Mapping

Kelly is a GIS analyst and owner of a small environmental consulting firm that specializes in wetlands assessment and mapping. In addition to her GIS skills, she is a trained botanist with years of experience doing field surveys and analyzing soil samples to delineate tidal wetlands. She has recently begun work on a project commissioned by the State of Oregon to identify estuarine areas on the Pacific coast and to prioritize them for conservation and restoration. The contract is a great opportunity for Kelly's firm. If her work is well received, it could lead to similar and even more lucrative contracts in Oregon and elsewhere.

The contract requires Kelly and her team to follow the client agency's established protocol for mapping tidal wetlands. The protocol involves several existing data sources. One is a digital map of probable tidal wetlands in the area (Scranton 2004). The protocol allows removal of polygons from this dataset if aerial photography interpretation, field visits and other ancillary data suggest these do not represent actual tidal wetlands. In addition, areas may be added to the tidal wetlands dataset after field inspection if these areas are already identified and mapped in the National Wetlands Inventory (NWI) database. However, because the protocol is designed to be repeatable and usable by many people who may not have a background in wetland delineation, it does not include methods for adding new wetlands to the database that aren't already mapped in the NWI.

During Kelly's visits to sites of previously identified tidal wetlands, she finds evidence of additional wetlands that aren't mapped in either data source. However, the client agency's protocol doesn't accommodate the soil sampling needed to confirm Kelly's hypothesis. Neither does her project budget and schedule of deliverables provide the money or time needed to perform the extra work. She knows she cannot devote unbillable hours to the tasks either, since the project budget is barely adequate for the scope of work.

There seems to be no way to verify with certainty that these areas are or are not wetlands. Leaving the sites out of her map products could result in important estuarine resources being excluded from conservation and restoration plans. It may even reduce the overall efficacy of the agency's wetland conservation program by leaving out ecologically and spatially important linkages between previously mapped wetlands. But including them would violate the methodology of the protocol and could threaten the perceived integrity of her work. It would also cause her firm to lose money, which a small company cannot afford to do.

What should Kelly do?

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Resources for educators

Suggested discussion points, relevant GISCI Rules of Conduct, and further resources related to this case study are available on request. Send request to David DiBiase (dibiase@psu.edu) along with contact information (including your position and affiliation) and a brief description of how you plan to use the case.

Suggested citation: Duncan, James (2009) Case Study: Public Access to Government Data. GISProfessional Ethics Project <http://gisprofessionalethics.org>

Reviewers: Dawn Wright (Department of Geosciences, Oregon State University), David DiBiase (Dutton e-Education Institute, Penn State University), Francis Harvey (Department of Geography, University of Minnesota).

Acknowledgment

Acknowledgment: This case was developed as part of the course, GEO 599, *Responsible GIS Practice: Ethics for Future Geospatial Professionals* at Oregon State University, Winter 2009, under the guidance of Professor Dawn Wright.

The author thanks Laura Brophy, owner of Green Point Consulting, LLC, for her suggestions and time in developing this case study.

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Case study: Tidal Wetland Mapping

Resources for educators

Suggested discussion points

1. Identify and discuss elements of the ASPRS Code of Ethics and GISCI Code of Ethics and Rules of Conduct that pertain to this case.
2. Are there alternative methods the GIS Professional can use to achieve both goals? If so, what are they?
3. Should this type of resource mapping be done if it can't be done to the fullest accuracy possible?
4. Who is or should be responsible for making sure these map products are used appropriately?

Relevant Elements of the GISCI Code of Ethics

I. Obligations to Society: 1. Do the Best Work Possible. Be objective, use due care, and make full use of education and skills.

I. Obligations to Society: 1. Do the Best Work Possible. Practice integrity and not be unduly swayed by the demands of others.

II. Obligations to Employers and Funders: 1. Deliver Quality Work. Define alternative strategies to reach employer/funder goals, if possible...

Relevant GISCI Rules of Conduct

I. Obligations to Society: 2. We shall not intentionally alter data or inputs where the practice does not conform to standard analysis procedures.

Relevant Elements of ASPRS Code of Ethics

1. Be guided in all professional activities by the highest standards and be a faithful trustee or agent in all matters for each client or employer.

2. At all times function in such a manner as will bring credit and dignity to the mapping sciences profession.

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Case study: Mapping Muslim Neighborhoods

A GIS Professional employed as director of a research laboratory called the Center for Risk and Economic Analysis of Terrorism Events at a private university in southern California receives an inquiry from a senior officer of the Los Angeles Police Department (LAPD).

The officer seeks the laboratory's assistance in a "community mapping" project whose purpose is to "lay out the geographic locations of the many different Muslim population groups around Los Angeles," and to "take a deeper look at their history, demographics, language, culture, ethnic breakdown, socio-economic status, and social interactions." The community mapping project is to be one component of a counter-terrorism initiative that aims to "identify communities, within the larger Muslim community, which may be susceptible to violent ideologically-based extremism..." (Downing 2007, p. 7). The director invites the officer to send the laboratory a Request for Proposal (RFP).

Soon after the telephone contact, the police officer is invited to Washington DC to explain the LAPD plan to the U.S. Senate Committee on Homeland Security and Governmental Affairs. The Committee chairperson cites it, among other similar projects, as an example of effective local-level counter-terrorism strategy.

News of the Senate Hearing and the LAPD plan is reported by the major media outlets including the New York Times, KNBC Los Angeles, and National Public Radio. Within days, representatives of three local Muslim groups along with the American Civil Liberties Union sent a letter to the officer expressing "grave concerns about efforts by the Los Angeles Police Department ("LAPD") to map Muslim communities in the Los Angeles area as part of its counter-terrorism program." The signatories argued that the community mapping project

...seems to be premised on the faulty notion that Muslims are more likely to commit violent acts than people of other faiths. Singling out individuals for investigation, surveillance, and data-gathering based on their religion constitutes religious profiling that is just as unlawful, ill-advised, and deeply offensive as racial profiling (Natarajan et al 2007, p. 1).

Meanwhile, the LAPD's RFP arrives at the University lab. The well-funded project will involve considerable GIS work, involving support for both student interns and professional staff. The potential project's stated purposes align with the Center's mission, which is to "to improve our Nation's security through the development of advanced models and tools for the evaluation of the risks, costs and consequences of terrorism." However, the associate director worries about the unfavorable publicity and possible legal action that might attend the project, particularly since the University describes itself as "pluralistic, welcoming outstanding men and women of every race, creed and background" in its mission statement. How should the director respond to the RFP?

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Resources for educators

Suggested discussion points, relevant GISCI Rules of Conduct, and further resources related to this case study are available on request. Send request to David DiBiase (dibiase@psu.edu) along with contact information (including your position and affiliation) and a brief description of how you plan to use the case.

Suggested citation: DiBiase, David, Francis Harvey and Dawn Wright (2009) Case Study: Mapping Muslim Neighborhoods. GISProfessional Ethics Project <http://gisprofessionalethics.org>

Reviewers: Michael Davis (Center for the Study of Ethics in the Professions, Illinois Institute of Technology), Chuck Huff (Department of Psychology, St. Olaf College), and Matthew Keefer (Division of Educational Psychology, University of Missouri-St. Louis).

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Case study: Mapping Muslim Neighborhoods

Resources for educators

Suggested discussion points

1. Should the director submit a proposal to provide mapping services to the LAPD?
2. Do the mission statements of the Center and the University provide conflicting moral guidance?
3. With whom might the director discuss the ethical implication of the proposed project?
4. Which of the GISCI Rules of Conduct pertain to this case?
5. In what sense does mapping constitute profiling?
6. Using public domain data and software provided by the U.S. Census Bureau at <http://factfinder.census.gov> one can map Percent of Persons of Arab Ancestry in Los Angeles, 2000, by census tract. In what sense does this differ from the community mapping project proposed by the LAPD?

Relevant GISCI Rule of Conduct

Section IV, Number 3: "We shall allow people to know whether they are included in a database and to see the information listed about themselves. We shall encourage them to correct any inaccurate information about themselves. We shall allow them to remove their inclusion unless prevented by law or a greater societal good."

Epilogue

A week after national news stories broke and the letter of objection was received from Muslim leaders and the ACLU, The LAPD announced that the community mapping component of its counter-terrorism plan had been "shelved" (KNBC 2007b). A day later, Chief of Police William Bratton clarified that the plan to map Muslim neighborhoods had "been scrapped; it hasn't been shelved." Chief Bratton had observed at a police cadet graduation ceremony that "I think what we got hung up on unfortunately was a word – mapping" (KNBC 2007a).

Further resources

Text

KNBC (2007b) LAPD To Propose Alternative to Mapping Muslim Communities. 15 November. Retrieved 12 June 2008 from <http://www.knbc.com/news/14605514/detail.html>

Rossmo, D. Kim (2000) *Geographic Profiling*. Boca Raton, FL: CRC Press.

Digital audio

National Public Radio (2007) Plan to Map L.A.'s Muslims Sparks Outrage. 9 November. Digital audio file heard 12 June 2008 at <http://www.npr.org/templates/story/story.php?storyId=16162012>



Case study: Public Access to Government Data

In the early 1990s the County of Santa Clara, California signed an agreement with a private contractor to convert the County's existing 1"=500' (1:6000)-scale parcel maps to a "digital cadastral base map" (County of Santa Clara 1993, p. 1). To finance the project the County issued a government bond to cover half of the contractor's up-front costs. It executed a cost-sharing agreement with the Santa Clara Valley Water District to pay the other half.

The agreement with the contractor stipulated that the County would own (claim copyright over) the digital base map. However, the County and contractor agreed to split revenues earned through sales of the database to "the broadest possible base of potential users, including, but not limited to, the real estate industry, the community development market, public safety organizations, private industry, government agencies and the general public" (County of Santa Clara 1993, p. 1). The County and contractor anticipated annual sales revenues of \$300,000 each within five years of the base map's production. The County planned to use the earnings to subsidize base map maintenance and related GIS services.

In 2005, at the request of a state legislator, the California Attorney General issued an opinion that "parcel boundary map data maintained by a county assessor in an electronic format is subject to public inspection and copying under provisions of the California Public Records Act" (Locklear and Stone 2005, p. 2). Consistent with that Act, the Attorney General's opinion held that government agencies should respond in a timely manner to requests to digital cadastral data, and should provide the data at nominal cost.

A 2006 survey by the Open Data Consortium revealed that 36 of California's 58 counties licensed parcel data at no cost or at the cost of reproduction. Thirteen counties, including Santa Clara, continued to offer their data for sale at higher costs despite the Attorney General's opinion. In October 2006 the California First Amendment Coalition (CFAC) filed suit against the County, claiming that the parcel data are public documents subject to the California Public Records Act, which states that state agencies "shall make the records promptly available to any person upon payment of fees covering direct costs of duplication" (State of California 2004). In its opposition to the suit Santa Clara County argued that the digital cadastral basemap constituted proprietary software (which is specifically excluded from the Public Records law) and that the loss of licensing fees would undermine support for the County's mapping activities.

With the Superior Court ruling still pending, Santa Clara County suspended sales of its cadastral database in April 2007, citing concerns that "about alerting potential terrorists to the location of pipelines feeding San Francisco water from the Hetch Hetchy reservoir" (San Jose Mercury News 2007a). The County subsequently requested that the database be designated as "critical infrastructure information" by the U.S. Department of Homeland Security. CFAC replied that "there's nothing sensitive in the database that isn't already available in other public information" (San Jose Mercury News 2007b).

On May 22, 2007 County Superior Court judge James Klienbergr ruled that a digital cadastral basemap is a public record, and that Santa Clara County must provide public access to the data

at reasonable cost. On June 14 the County appealed the decision to California Superior Court, stating that the further court action was required “to help us with the balancing act between the public’s interest in knowing and public safety” (San Jose Mercury News 2007b). In February 2009 the California Court of Appeal rejected the County’s claim that its cadastral database should be considered “critical infrastructure information.” And in October 2009, Santa Clara County was ordered to pay \$500,000 in legal fees to the California First Amendment Coalition, and to make the County’s cadastral basemap data available to the public at the cost of reproduction—\$3.10 per disk.

In 2010, however, the Superior Court of Orange County ruled that the County’s “O.C. Landbase” met the definition of “computer software” in the California Public Records Act, and was therefore exempt from disclosure rules. Rejecting the Sierra Club’s argument that the Santa Clara case was a controlling precedent, the Court ruled that the County was acting within the law when it charged the Club \$375,000 to license the Landbase (Joffe 2010).

Sarah is a Certified GIS Professional who is employed as the GIS Manager of another county in California. Sarah has recently overseen development of an expensive GIS database that will support operations of several county departments. Sarah’s bosses, the county commissioners, are sharply divided about how their county should respond to the equivocal court decisions. Some commissioners feel strongly that the database is a public record, and should be distributed accordingly. Other commissioners are convinced that the database is software, and that county should charge licensing fees to recoup the substantial costs of maintaining the database. The commissioners summon Sarah to a closed-door meeting about the issue. Sarah knows that the commissioners respect decisiveness, and will insist that she not equivocate. What should Sarah recommend?

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Case study: Public Access to Government Data

Resources for educators

Suggested discussion points

1. Identify and discuss elements of the GISCI Code of Ethics and Rules of Conduct that pertain to this case.
2. Under what circumstances might it be defensible to deny public access to government data produced with public funds?
3. How might government agencies recoup costs of maintaining geospatial data without imposing fees that have the affect of denying access to public records?

Relevant GISCI Code of Ethics

I. Obligations to Society: 2. Contribute to the Community 2.1 Make data and findings widely available. 2.3 Donate services to the community.

II. Obligations to Employers and Funders: 1.4 Define alternative strategies to reach employer goals. 2.6 Accept decision of employers and clients unless illegal or unethical.

Relevant GISCI Rules of Conduct

I. Obligations to Society: 4. Hold paramount the safety, health and welfare of the public

III. Obligations to Colleagues and the Profession: 7. Honor intellectual property rights of others.

Relevant ASPRS Code of Ethics

7. Recognize proprietary, privacy, legal and ethical interests and rights of others.

Further resources

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Reviewers: Mary Tsui (Land Systems Group, Monterey CA), Bruce Joffe (GIS Consultants & Open Data Consortium), Michael Davis (Center for the Study of Ethics in the Professions, Illinois Institute of Technology), Chuck Huff (Department of Psychology, St. Olaf College), and Matthew Keefer (Division of Educational Psychology, University of Missouri-St. Louis).

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