San Francisco Urban Wind Power Task Force

Report and Recommendations

August 21, 2009

ACKNOWLEDGEMENTS

The members of the San Francisco Urban Wind Power Task Force would like to acknowledge the leadership and vision of Mayor Gavin Newsom and former Supervisor Tom Ammiano, who created the Task Force. We would also like to thank the individual Task Force members (listed in Attachment A) who contributed considerable time and dedication to the Task Force over the past year in the name of promoting clean, renewable energy and helping the City meet its sustainability goals. We thank Wade Crowfoot from the Mayor's Office and Johanna Partin from the Department of the Environment for leading Task Force meetings and guiding the development of this report, and Department of Environment interns Larry Chang and David Lara for their significant contributions to this report and Task Force meeting documentation.

I. INTRODUCTION

The City and County of San Francisco has set ambitious goals of achieving 50 MW of in-city renewable energy generation and reducing greenhouse gas emissions to 20% below 1990 levels by 2012, with complete carbon neutrality by 2030. Mayor Newsom, the Board of Supervisors and relevant City departments are united in their commitment to greenhouse gas reduction and providing the resources necessary to meet these commitments. In pursuit of these aggressive goals, the City is promoting a number of programs to support energy efficiency, solar PV, solar water heating, wave and tidal power, geothermal heat pumps and cogeneration. The City has also begun exploring whether "urban wind" might play a role in its renewable energy future.

While much remains unknown about the use of small wind turbines in urban environments, urban wind has the potential to offer several benefits. Besides mitigating climate change and reducing the need for fossil fuels, urban wind has the potential to provide:

- Homeowners and businesses with a clean, distributed energy option for managing their energy needs and savings while increasing their property values;
- Examples of distributed generation at or near the point of use;
- Integration into an existing transmission grid and built environment; and
- An opportunity to create new green jobs.

Though San Francisco has only a "moderate" medium- to large-scale wind on-shore resource,[1] the City's small-scale wind resource is not yet fully understood. Conditions in some parts of the City may be suitable—perhaps optimal—for micro- and small-scale "urban" wind applications.

In order to better understand San Francisco's urban wind opportunities, in July 2008 Mayor Gavin Newsom and then-Supervisor Tom Ammiano created the Urban Wind Power Task Force. The Task Force's mandate was to explore the potential for small-scale wind generation in San Francisco and develop recommendations for advancing City policy to encourage the expansion of local wind power generation. Comprised of representatives from the small wind industry, environmental community, green building, labor, workforce development, research labs, prospective residential and business customers, State regulatory agencies, PG&E and relevant City departments (see Taskforce Members, Attachment A), and coordinated by the Mayor's Office and the SF Department of the Environment, the Taskforce met monthly for eight months to explore key issues facing small-scale wind power development in urban environments. Specific issues addressed included:

- Small Wind Technologies, Testing and Certification
- Understanding the Wind Resource and Data Collection
- Permitting
- Costs & Incentives
- Potential Impacts on Flying Animals
- Clean Tech and Workforce Development Opportunities

[1] CEC PIER Final Project Report, "City and County of San Francisco Wind Resource Assessment Project, September 2004.

- Public Awareness and Possible Demonstration Sites

This report highlights the Task Force's key findings and provides recommendations to help the City advance urban wind power.

II. KEY FINDINGS AND RECOMMENDATIONS

A. Urban Wind Technologies, Testing and Certification

For the purposes of the Task Force's discussions, "urban wind" was defined as wind energy appropriate for urban environments.

"Small wind" is defined by the American Wind Energy Association (AWEA) as a wind turbine whose production capacity is 100 kW or less. The Consumer Energy Center (CEC) defines small wind as "electricity-producing, wind-driven generating systems with a rated output of 50 kilowatts or less." For the purposes of Task Force discussions, small wind was defined as 50 kW or less.

Though small wind generators (SWGs) are commonly sited in rural or semi-rural locations, their urban application has been quite limited. This is because optimal winds typically are easier to access in more outlying areas with fewer physical obstructions, and much zoning today reinforces the use of SWGs on relatively larger parcels of open space. At present, there are only approximately 400 small wind installations generating 2.5 MW of electricity in California, only a handful of which are in San Francisco, operating mostly for private residential use or as demonstration projects. (See section II.G for more information on current SWG installations in San Francisco.)

The technological principles of wind turbines are simple: wind turbines convert the wind's kinetic energy into sufficient mechanical energy (shaft rotation) to run a generator. Besides the rotor (with blades/scoops), additional components for electrical production include a generator, gearbox, tower or support, electronic controls, and interconnection equipment. There are three main types of small wind generators (SWGs):

- Horizontal-axis wind turbines (HAWTs) utilize a horizontally mounted rotor shaft on top of a tower and have blades resembling propellers. Figures 1 and 2 show examples of some HAWTs currently on the market.
- Vertical-axis wind turbines (VAWTs) have rotor shafts that are oriented vertically and often come in Darrieus (egg-beater) or Savonius (wind scoop) configurations. Figures 3-6 show examples of some VAWTs currently on the market.
- Ducted Wind Turbines, also known as "diffuser augmented" wind turbines (DAWTs), incorporate a shroud, or 'diffuser,' which is about twice the diameter of the turbine rotor. The diffuser is a large structure which surrounds the rotor and must be supported at rotor height and be oriented to face the wind.[2] Figures 7-8 show examples of some DAWTs on the market.

[2] Geoff Henderson, http://www.wind-works.org/articles/vort_closure_hend.html

Figures 1-2 – Examples of HAWTs

Fig. 1 Southwest Windpower Skystream 3.7

Fig. 2 AeroVironment AVX1000

Figures 3-6 – Examples of VAWTs

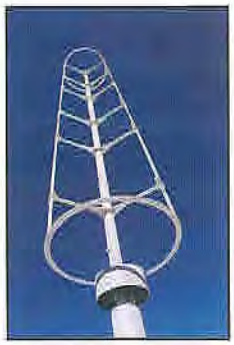

Fig. 3 Mariah Power Windspire

Fig. 4 Wind-Sail 3kW

Fig. 5 Blue Green Pacific Wind Turbine

Fig. 6 Helix Wind S322

Figures 7–8 - Examples of DAWTs

Fig. 7 Green Energy Technologies WindCube

Fig. 8 Turbo Wind Mill 5000 TWM-5000

Much more research is needed on the benefits and drawbacks of the various HAWT, VAWT and DAWT technologies. The primary perceived benefits of HAWTs are that they are more efficient and produce more energy than VAWTs. The primary perceived benefits of VAWTs are that they can be installed in areas that receive low-lying, turbulent winds, have low start-up speeds, have low noise levels and fewer vibrations, and are thought to cause fewer bird or bat mortalities. To date, there have been no conclusive studies confirming these claims. The primary perceived benefits of

DAWTs are that they have the same benefits as VAWTs, but their design increases the wind speed through the turbine and thus "augments" the power output.

To date, there exists no formal state or municipal requirement in California for SWG certification prior to installation. However, to be eligible for the state's Emerging Renewables Program incentive,[3] any manufacturer must either have its product certified to the International Electrotechnical Commission (IEC) 61400-2 standard or provide one year of operational data. The current list of eligible small wind turbines can be found on the California Energy Commission's (CEC's) Consumer Energy Center website.[4]

In an effort to enhance quality assurance, the Small Wind Certification Council (SWCC) has been created as a joint project between the American Wind Energy Association (AWEA) and the Interstate Renewable Energy Council (IREC) as an independent certification body for small wind turbines. Its mission is to verify that such devices meet or exceed the performance, durability, and safety requirements of AWEA's Small Wind Turbine Performance and Safety Standard. According to SWCC, "This certification will provide a common North American standard for reporting turbine energy and sound performance, and help small wind technology gain mainstream acceptance."[5] At present, AWEA is finalizing a standard that will be recognized by the IEC before SWCC can begin accepting applications for certification sometime in fall 2009. SWCC will certify new HAWTs, VAWTs, and DAWTs (both grid-tied and off-grid) that produce 65 kW or less. In the meantime, the National Renewable Energy Laboratory (NREL) is performing its own tests on a select number of turbines, including three HAWTs and one VAWT. NREL will independently test power quality, power performance, and noise levels of these turbines to certify that they meet IEC standards.

The absence of third-party certification and verification of SWGs serves as a significant barrier to the promotion of small wind in San Francisco and elsewhere. Presently, consumers do not have access to the information they need to assess whether small wind is a good option for them. San Franciscans interested in small wind do not know what types of SWGs are available, cannot access verifiable and easily understandable information about the output and efficiencies of small wind turbines, are unable to "compare apples to apples" when evaluating different SWGs, and often express confusion over the different claims made by different SWG vendors. Many are also understandably confused about the pros and cons of HAWTs versus VAWTs versus DAWTs. Having SWCC's certification and verification process in place will provide important criteria by which consumers can make informed decisions.

Recommendations:

1. The City should encourage the rapid implementation of SWCC's certification procedures, and wide-scale adoption of SWCC standards by SWG manufacturers.
2. The City should encourage or require manufacturers to adopt information labels (similar to the Energy Star appliance program) that will assist the general public with SWG comparisons.
3. The Department of the Environment should develop informational materials to provide the public with the information necessary for making informed product comparisons.

[3] Section IID provides more information on incentive programs.
[4] www.consumerenergycenter.org/cgi-bin/eligible_smallwind.cgi
[5] http://www.smallwindcertification.org/

B. Understanding the Wind Resource and Data Collection

Understanding the quality of the wind resource in absolutely critical before any program or policy can be established to promote small wind. Although there are wind maps for San Francisco—for example, NREL's 50-meter wind resource map,[6] and 3 Tier's "First Look" wind map[7]—their resolutions do not provide adequate detail for a reliable assessment at the neighborhood or building level.

Wind energy experts agree that assessing a site's wind resource—including wind velocity, pressure, direction and turbulence—is a critical first step in evaluating whether a site is a good candidate for wind. These factors can be measured by a device known as an "anemometer," or wind meter. Most wind experts recommend collecting 12 months' worth of data or more for a thorough understanding of a site's wind quality. However, computer models can be used to extrapolate annual wind data from shorter collection periods. The cost of an anemometer ranges from $165 to $8,000, depending on the anemometer. Some anemometers can be purchased online and installed relatively easily. The CEC's Public Interest Energy Research program (CEC-PIER) commissioned a 2005 report[8] to recommend protocol for a possible statewide anemometer loan program, and several anemometer loan programs exist around the country to help potential wind customers better understand their wind resource. (See Attachment B for more information on these anemometer loan programs.)

The San Francisco Public Utilities Commission (SFPUC) has installed anemometers at 20 locations around the City. Some of these locations have been gathering wind data since 2001; others for only a few months. This data has not yet been made publicly available due to necessary adjustments in monitoring equipment, but is expected to be posted on the SFPUC web site (www.sfwater.org) in the fall of 2009.

Additional San Francisco wind data has been gathered and modeled by scientists at UC Davis, who conducted a wind tunnel study of several downtown San Francisco buildings in 2006. This study, conducted by UC Davis' Environmental Fluid Dynamics Lab, created physical models of downtown buildings, then placed them into an atmospheric boundary-layer wind tunnel to simulate and study wind behavior. To predict average wind power on the surface of buildings, measurements were taken across multiple points on a given model's surface, then adjusted to full-scale values. Many of the buildings studied, such as the Fox Plaza high-rise on Market Street, showed multiple points along the building's roof and sides with good or excellent power densities. Such wind tunnel studies, while not exhaustive, can provide a relatively quick, accurate and economical preliminary assessment of urban wind resources.

The San Francisco Department of the Environment is planning to use the SFPUC and UC Davis data to map the city's wind resource at the finest possible resolution, with the desired end product being a web-based map, similar to the SF Solar Map (www.sf.solarmap.org), that provides wind resource data on a neighborhood-by-neighborhood or city block-by-city block level.

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[6] http://www.windpoweringamerica.gov/wind_maps.asp
[7] http://firstlook.3tiergroup.com/
[8] CEC-PIER, *Wind Anemometer Loan Program Protocol*, December 2005.

Recommendations:

1. The SFPUC should make data (including site-specific characteristics and data collection methods) from its 20 wind monitoring stations publicly available as soon as possible, but no later than September 2009.
2. The SFPUC should consider installing additional anemometers in parts of the City that prove to be particularly windy.
3. The Department of the Environment should develop an "SF Wind Map" to map the city's wind resource at the finest possible resolution.
4. The City should consider working with UC Davis and other research labs to conduct city-wide wind tunnel studies to better understand the City's wind resource.
5. The City should consider implementing a wind anemometer loan program (in collaboration with national labs, wind experts, wind industry representatives and academic institutions) to help potential wind customers in San Francisco better understand their wind resource.

C. Permitting

A recent survey by the California Wind Energy Collaborative[9] indicates that frustration with the permitting process is common among SWG vendors in the state. Length of permitting period, inconsistent regulations, over-restrictive codes, and high permit fees are common complaints. Additional plan check requirements (e.g., engineering analysis and design) imposed by permitting authorities also inflict extra costs and time.

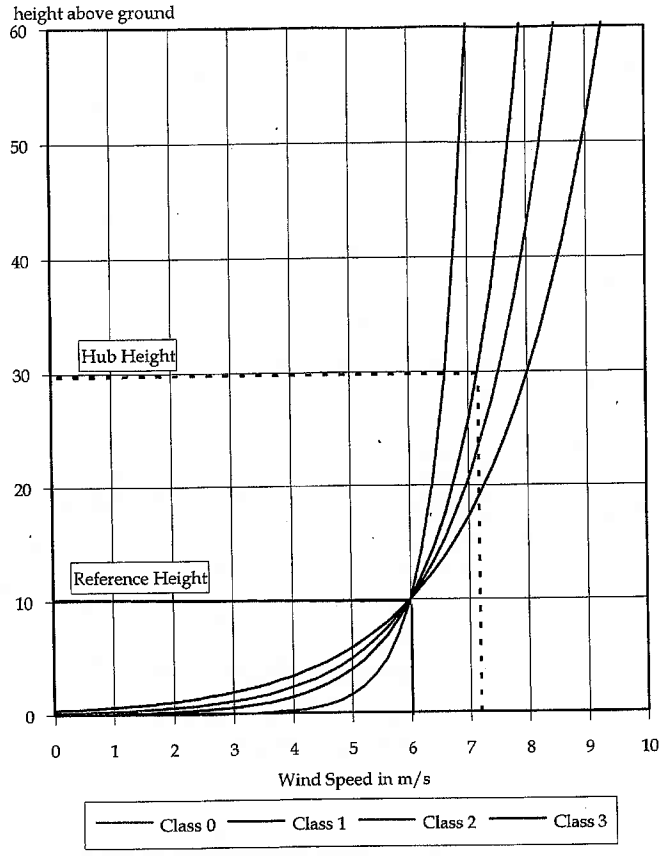
The Task Force identified the following key permitting issues:

- Height – Planning Code dictates that SWGs may not be installed higher than 10-16 feet, depending on the zone, above the building's mapped height.[10] Depending on adjacent structures and available wind, the City's height allowances may be insufficient for effective operation of some turbines. As a general rule, the higher a SWG can be placed, the better its access to faster wind. As illustrated in Figure 9, wind power generation increases exponentially as a function of wind speed.
- Public Notification – Roof-mounted SWGs usually do not require Section 311/312 public notification, but free-standing SWGs must undergo this 30-day process. Historic properties and landmark structures may require additional review and hearings.
- Permitting Fees – San Francisco wind permitting fees are reported by vendors who have completed projects in San Francisco to be in the range of $1,000-$5,000, depending primarily on whether public notification is required. Currently fees are assessed as a percentage of installed cost, making fees higher for larger—though not necessarily more complex—SWG installations.

[9] "Small Wind Permitting Challenges: Findings from a Survey of Small Wind Installers," CWEC-2009-01, http://cwec.ucdavis.edu/smallwindreports/.

[10] Some "Special Use Districts" in the City have set even more stringent height restrictions. For example, before 2007 Bernal Heights prohibited roof-mounted structures, including SWGs, from being installed higher than 5 feet above the building's mapped height. However, Bernal Heights' special use code was amended by Supervisor Ammiano in (date) to exclude SWGs from this special height requirement.

Figure 9 – Wind speed as a function of height



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- Noise – Noise from wind turbines varies, depending on the particular design and placement of the SWG; some are virtually silent, while others make audible "whirring" noises while they spin. Placing SWGs higher can reduce emitted noise, as doubling the distance can decrease sound levels by a factor of four.
- Vibrations – Wind turbines vibrate when they spin, some more than others. The expected impact of vibrations from rooftop mounted turbines upon building structures must be evaluated by building inspectors to ensure the building integrity remains intact.
- Visual Impact – The visual impact of SWGs is a very subjective matter. Some enjoy the appearance of wind turbines, seeing them as a sign of their owner's commitment to sustainability, and viewing them as "green sculptures" or "green art." Others consider them an eyesore. Some wind turbines can produce a "strobe light" effect as the sun reflects off their rotors, causing an annoyance to neighbors.

All of these factors must be taken into account when issuing permits.

On July 17, 2008, Mayor Newsom issued Executive Directive 08-08 (Attachment C), instructing the Department of Building Inspection (DBI) and Planning Department to "expedite permitting and

[11] http://www.afriwea.org/download/R-WindAfrika_010404_engl.pdf

minimize costs for the installation of residential, commercial and municipal wind generation turbines in the City." On October 22, 2008, the Planning Department issued a memo detailing the small wind permit application and review process (Attachment D), and on October, 15, 2008, by action of the Building Inspection Commission, DBI revised Administrative Bulletin AB-004 to prioritize permit review for wind generation projects (Attachment E).

Recommendations:

1. The City should explore ways to offer permitting cost refunds to offset or partially offset the cost of permitting SWGs. The SF Department of the Environment should work with DBI/Planning to identify possible refund programs.
2. DBI and Planning should convene a "small wind permitting subcommittee" comprised of representatives of the small wind industry, bird and bat advocates and relevant permitting authorities, to review current permitting requirements for SWGs and revise them based on subcommittee discussions. Permitting requirements should be revised and posted no later than winter 2009.
3. SWG permitting requirements and application process should be posted on the DBI and Planning Department websites to ensure that the public is fully aware of these procedures.
4. DBI and Planning should ensure that all relevant staff are knowledgeable about SWG permitting requirements to minimize inconsistency in the permit application process.
5. The City should consider revising city-wide height limits to exceed what is currently allowed, thereby allowing for greater wind power generation.
6. Planning should work with the Department of the Environment to require and collect wind and turbine output data as a condition of approval for SWG permit applications. This will help build data points for a citywide Wind Map and to improve overall understanding of San Francisco's small wind resource.

D. Costs and Incentives

Due to the emerging nature of small wind turbines, it is difficult to estimate a "typical" cost for installing SWGs. Many SWG manufacturers are start-ups and have not yet begun mass production of their products; therefore most of the SWGs currently installed in San Francisco and other urban centers have been done so as demonstration sites, with costs determined on a case-by-case basis. Vendors report permitting costs as a large percentage of current installation costs. (This issue is addressed at greater length in Section C above.)

The following State and Federal incentive programs are in place to support SWGs:

- Owners of small wind systems with 100 kW of capacity or less can receive an uncapped federal investment tax credit for 30% of total installed costs.
- The CEC's Emerging Renewables Program offers rebates for small wind systems (rated output of 50 kW or less) at $2.50/watt for the first 7.5 kW and $1.50/watt for 7.5-30 kW.
- For SWGs between 30 kW and 5 MW, the CEC's Self Generation Incentive Program provides $1.50/watt up to 1 MW, $.75/watt for 1-2 MW, and $.375/watt for 2-3 MW.
- Like solar photovoltaics (PVs), net metering is available for grid-tied SWGs.

Recommendations:

1. It is premature to consider a local incentive program, like the City's GoSolarSF incentive program, for SWGs. However, the City can take other actions to promote increased adoption of SWGs, such as those that follow.
2. The City should support legislation to continue or expand federal and state incentive programs.
3. The City should include SWGs in the City's on-property-tax-bill financing program, which is currently under development.
4. The City should consider exempting SWGs from property tax increases.

E. Potential Impacts on Flying Animals

While wind turbines most certainly have been responsible for avian mortalities, extensive evidence suggests that buildings and cats are far more dangerous to birds than wind turbines. For example, one study reported that together they cause roughly 65% of annual avian fatalities, yet only 0.1-0.2% are attributable to wind turbines. However, while bird/bat mortalities at utility-scale installations (e.g. Altamont Pass) have been researched at length, there are few, if any, studies of urban-based bird and bat impacts due to SWGs.

Variables that might influence mortality rates in urban environments include the kinds of species present, migration patterns, behavior within an urban context, light pollution, and reaction to specific SWG designs. For example, it is unclear whether horizontal or vertical-axis turbines might be easier for birds to avoid than horizontal-axis turbines due to motion smear or apparent solidness. This lack of information makes critical the need for a bird and bat data collection program to assess the impact of these devices in urban environments.

San Francisco's Building Inspection and Planning Departments require SWG owners to report any flying animal impacts as a condition of receiving a wind turbine permit. None have been reported to date; however, it is unclear whether this is the result of a lack of SWG-related mortalities, or whether data collection methodologies should be better defined and monitored.

Recommendations:

1. The City should work closely with the Golden Gate Audubon Society and other bird and bat advocacy organizations to monitor, research and mitigate the potential impacts of SWGs on birds and bats.
2. The Building Inspection and Planning Departments should continue to require SWG users to record and report any SWG-related flying animal impacts as a condition of receiving a wind turbine permit, and should consider imposing more stringent data collection standards.

F. Clean Tech and Workforce Development Opportunities

In 2008, there was a total installed capacity of 2,517 MW of large- and small-scale wind power in California, up from a total of 2,439 MW the year before. Though a 3% increase might seem modest, U.S. wind power capacity has risen 27% per year on average in this decade. The impact of this growth on the job market, including small wind, will be further detailed in a comprehensive report by AWEA to be released in late 2009.

While there are currently only a handful of wind energy distribution and installation companies and only one wind turbine manufacturer based in San Francisco, there is room for many more. Mayor Newsom has put a number of programs in place to encourage clean tech businesses to locate in San Francisco, including the City's Clean Tech Payroll Tax Exclusion, for which small wind companies are eligible. Given the emerging nature of urban wind and the significant needs facing small wind start-ups, the City will need to consider additional services it can provide to such companies to encourage them to locate in SF.

As the demand for wind energy increases, so should a number of corresponding green jobs including turbine and system design, manufacturing, installation, operations and maintenance, project management and business development. According to *Green Industries and Jobs in CA* (Jan. 2009), a report by the Centers of Excellence/CA Community Colleges, over 25,000 turbines exist in the U.S. but fewer than 15 schools nationwide are presently training heavy wind technicians. In California, only two schools (Cerro Coso Community College and Shasta College) provide such instruction, with Fresno City College joining the list in spring 2010. Similarly, small wind courses might develop through community colleges and other sources of workforce training or become extensions of existing solar technician programs. San Francisco City College is developing new curricula to prepare students for green jobs, but to date, has not included wind-related training. The local electricians' union also has green apprenticeship programs but to date has not included training in wind installation or technologies. There are many similarities in the way roof-mounted solar and wind systems are installed; including wind installation training in existing solar installation training courses is an untapped opportunity.

Recommendations:

1. The City should continue to make small wind companies eligible for the Clean Tech Payroll Tax Exclusion and other incentive programs to attract clean tech firms to the City.
2. The City should consider providing additional services for SF-based small wind start-ups, such as:
   - Small business incubation services, such as subsidized office and manufacturing space and facilitating access to angel investors or venture capitalists;
   - Fostering partnerships with local research labs (i.e. Lawrence Berkeley National Laboratories, Stanford University, NASA) to allow for free or subsidized access to wind tunnels and/or other high-tech testing equipment necessary for wind companies;
   - Implementing City-owned small wind demonstration installations to help drive local demand for SF-based companies' products and services.
3. The City should encourage and support efforts by CityBuild Academy, the City's Green Academy, SF City College and/or relevant labor unions to provide wind assessment and small wind technician training and/or to provide dual solar PV-small wind installation training programs.

G. Public Awareness and Possible Demonstration Sites

As of July 2009, only a handful of SWGs have been installed in San Francisco, including three VAWTs on homes in Bernal Heights and the Castro, two HAWTs in the Mission and Twin Peaks neighborhoods, two VAWTs on the Hornblower Ferries, one VAWT at the Randall Museum, and another VAWT is being installed for testing on Treasure Island. Plans are in place for some additional commercial and residential SWG installations, at SF Zoo and on the new SFPUC headquarters building in the Civic Center.

One of the primary ways a city can support the development of emerging technologies is by installing them on city-owned facilities. In the Mayor's Executive Directive 08-08 issued July 17, 2008 (Attachment C), Mayor Newsom instructed all City departments to "make every effort to advance wind power generation by incorporating wind turbines into the design of existing and new City facilities whenever and wherever possible." A number of locations in the City have been suggested as possible demonstration sites, including Twin Peaks, Treasure Island, the Civic Center, Golden Gate Park, Ocean Beach, the San Francisco Zoo and SF International Airport. Such installations would serve a number of purposes, including providing real-world data on the viability of small wind technologies and power generated, serving as public educational opportunities, and providing tangible evidence of the City's commitment to clean energy technologies, to name a few.

Further, the SF Department of the Environment is in discussions with the Mayor's Office and Lawrence Berkeley National Laboratories about developing a SWG turbine testing facility and demonstration site on Treasure Island. This would serve not only to test SWG performance in a real-world setting, but also to better understand SWGs' impacts on flying wildlife and to build public awareness around the different types and models of SWGs available in the marketplace and how they perform in San Francisco conditions.

Recommendations:

1. The City should encourage City departments to comply with Mayor Newsom's Executive Directive 08-08 instructing City departments to "incorporate wind turbines into the design of existing and new City facilities whenever and wherever possible."
2. The SFPUC, the City's power provider, should work with City departments, especially those with facilities where the wind resource is expected to be good (SF Zoo, Port Authority, Parks and Recreation, SF Unified School District, Treasure Island and others), to identify and install municipal SWG demonstration sites. A City demonstration site plan should be developed no later than November 2009.
3. The Mayor's Office, in collaboration with Lawrence Berkeley National Laboratories and the SF Department of the Environment, should develop a SWG testing facility and demonstration site on Treasure Island.
4. To promote public awareness, the City should sponsor a SWG training course to teach San Franciscans how to assess the wind energy potential at their site, how to select an appropriate system for their needs, and how to navigate the permitting and installation processes, similar to the course offered in Davis by the California Wind Energy Collaborative.
5. The City should perform outreach to residents, private companies, institutions and organizations to promote more non-municipal SWG installations.
6. The City should consider revising its current Green Building standards to require all new residential & commercial construction and significant renovations to be built with the *potential* for installing renewable energy devices, including SWGs. Appropriate renewable energy technologies should be determined by specific site conditions.

SUMMARY OF RECOMMENDATIONS

Urban Wind Technologies, Testing and Certification

1. The City should encourage the rapid implementation of SWCC's certification procedures, and wide-scale adoption of SWCC standards by SWG manufacturers.
2. The City should encourage or require manufacturers to adopt information labels (similar to the Energy Star appliance program) that will assist the general public with SWG comparisons.
3. The Department of the Environment should develop informational materials to provide the public with the information necessary for making informed product comparisons.

Understanding the Wind Resource and Data Collection

4. The SFPUC should make data (including site-specific characteristics and data collection methods) from its 20 wind monitoring stations publicly available as soon as possible, but no later than September 2009.
5. The SFPUC should consider installing additional anemometers in parts of the City that prove to be particularly windy.
6. The Department of the Environment should develop an "SF Wind Map" to map the city's wind resource at the finest possible resolution.
7. The City should consider working with UC Davis and other research labs to conduct city-wide wind tunnel studies to better understand the City's wind resource.
8. The City should consider implementing a wind anemometer loan program (in collaboration with national labs, wind experts, wind industry representatives and academic institutions) to help potential wind customers in San Francisco better understand their wind resource.

Permitting

9. The City should explore ways to offer permitting cost refunds to offset or partially offset the cost of permitting SWGs. The SF Department of the Environment should work with DBI/Planning to identify possible refund programs.
10. DBI and Planning should convene a "small wind permitting subcommittee" comprised of representatives of the small wind industry, bird and bat advocates and relevant permitting authorities, to review current permitting requirements for SWGs and revise them based on subcommittee discussions. Permitting requirements should be revised and posted no later than winter 2009.
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13. The City should consider revising city-wide height limits to exceed what is currently allowed, thereby allowing for greater wind power generation.
14. Planning should work with the Department of the Environment to require and collect wind and turbine output data as a condition of approval for SWG permit applications. This will help build data points for a citywide Wind Map and to improve overall understanding of San Francisco's small wind resource.

Costs and Incentives

15. It is premature to consider a local incentive program, like the City's GoSolarSF incentive program, for SWGs. However, the City can take other actions to promote increased adoption of SWGs, such as those that follow.
16. The City should support legislation to continue or expand federal and state incentive programs.
17. The City should include SWGs in the City's on-property-tax-bill financing program, which is currently under development.
18. The City should consider exempting SWGs from property tax increases.

Potential Impacts on Flying Animals

19. The City should work closely with the Golden Gate Audubon Society and other bird and bat advocacy organizations to monitor, research and mitigate the potential impacts of SWGs on birds and bats.
20. The Building Inspection and Planning Departments should continue to require SWG users to record and report any SWG-related flying animal impacts as a condition of receiving a wind turbine permit, and should consider imposing more stringent data collection standards.

Clean Tech and Workforce Development Opportunities

21. The City should continue to make small wind companies eligible for the Clean Tech Payroll Tax Exclusion and other incentive programs to attract clean tech firms to the City.
22. The City should consider providing additional services for SF-based small wind start-ups, such as:
    - Small business incubation services, such as subsidized office and manufacturing space and facilitating access to angel investors or venture capitalists;
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Public Awareness and Possible Demonstration Sites

24. The City should encourage City departments to comply with Mayor Newsom's Executive Directive 08-08 instructing City departments to "incorporate wind turbines into the design of existing and new City facilities whenever and wherever possible."
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26. The Mayor's Office, in collaboration with Lawrence Berkeley National Laboratories and the SF Department of the Environment, should develop a SWG testing facility and demonstration site on Treasure Island.
27. To promote public awareness, the City should sponsor a SWG training course to teach San Franciscans how to assess the wind energy potential at their site, how to select an appropriate system for their needs, and how to navigate the permitting and installation processes, similar to the course offered in Davis by the California Wind Energy Collaborative.
28. The City should perform outreach to residents, private companies, institutions and organizations to promote more non-municipal SWG installations.
29. The City should consider revising its current Green Building standards to require all new residential & commercial construction and significant renovations to be built with the *potential* for installing renewable energy devices, including SWGs. Appropriate renewable energy technologies should be determined by specific site conditions.

Attachment A

SAN FRANCISCO URBAN WIND POWER TASK FORCE MEMBERS

Company/Agency	Name
Chairs	
Mayor, City & County of San Francisco	Gavin Newsom (Co-Chair)
San Francisco Supervisor, District 9	Tom Ammiano (Co-Chair)
Members	
450 Architects	Richard Parker
Blue Green Pacific	Todd Pelman
Bluenergy Solarwind, Inc.	Joel Goldblatt
Building Turbines	Patrick S. Harris
City College	John Rizzo
Earth Wind and Power LLC	Todd Fins
Global Exchange	Dr. Kevin Danaher
Golden Gate Audubon Society	Noreen Weeden
Helix Wind	Jon Dale
Ideas	Stephen Chapes
Innovo Energy (on behalf of AeroVironment, Inc.)	Rick Margollin
International Brotherhood of Electrical Workers Local 6	Tim Donovan
Lawrence Berkeley National Laboratory	Glen Dahlbacka
Mariah Power	Jeff Gigoux
Marinship Development International	Derek Smith
Occidental Power	Greg Kennedy
Prevailing Wind Power	Bob Hayes
Quickdraw Permit Consulting	Jeremy Paul
SF Recycling & Disposal, a Recology Company	Brad Drda
SF. Electrical Industry	Joel Koppel
Sierra Club	Michael Bornstein
Sightworks Architecture	Larry Chang
SPUR	Laura Tam
Sustainable Power Systems	Josh Melanson
Synergy California	Reinhold Ziegler
W Hotel	Michael Pace
Whirligig Inc.	Robin Wilson
Windation Energy Systems	Reza Sheikhrezai
WinDensity	Caryn Otto
WindTerra Inc.	Larry Wagner
Citizen	Chris Beudoin
Wind Advocate	Gayle Larson
Technical Advisory Members	
California Energy Commission, PIER Program	Martha Krebs
California Public Utilities Commission	Curtis Seymour
Department of Technology	Brian Roberts
Mayor's Office	Wade Crowfoot
Mayor's Office of Joint Development	Jack Sylvan
Pacific Gas & Electric	Chuck Hornbrook
Port of San Francisco	Rich Berman
Randall Museum	Chris Boettcher
San Francisco Department of Building Inspection	Laurence Kornfield
San Francisco Department of the Environment	Johanna Partin (Coordinator)
San Francisco Planning Department	Craig Nikitas
San Francisco Public Utilities Commission	John Doyle

Attachment B

SF Environment
David Lara
8/18/09

Anemometer Loan Program Survey

In summer 2009, the San Francisco Department of the Environment undertook a study of various wind anemometer loan programs around the country, as a first step toward exploring a similar program for the City and County of San Francisco. The anemometer loan programs summarized below represent some of the more established programs in existence as of this writing. In the programs studied, New Jersey was the only state that had installed an anemometer in an urban area, as part of its program. The main components of each of the programs are very similar, but each offers unique details that may be instructive as San Francisco considers implementing its own anemometer loan program.

1) Colorado

The Colorado Anemometer Loan Program is run by Colorado State University and is supported by the Governor's Energy Office of Colorado. The program gives preference to sites with the potential of being Class 2 or above and to areas that have no previous anemometer data. The site must have 300ft of free space around it and the applicant must show a strong interest in purchasing a SWG. The 20-meter and 30-meter anemometers are installed for 12 months and the applicant must replace the batteries and data plugs on a regular basis. If selected, the borrower has to determine what type of soil the site has and he/she is responsible for placing anchors on the site before the installation. A well developed consumer guide for SWG was published by the program along with an informative video that guides applicants through the loan program. Colorado's consumer information is comprehensive, and provides an in-depth explanation of application steps, and many useful resources available for consumers.

Contact: Michael Kostrzewa
Phone: (970) 491-7709
Email: michael@engr.colostate.edu

Loan Program Page:
http://www.engr.colostate.edu/ALP/index.htm
Colorado Consumer Guide to Purchasing SWG:
http://www.engr.colostate.edu/ALP/Small_Wind_Electric_Systems_A_Colorado_Consumers_Guide.pdf
Loan Program Application Video:
http://www.engr.colostate.edu/ALP/ALP_Small_Wind_Applications_Video.htm

2) Maryland

The anemometer loan program is part of the Maryland Energy Administration and is administered by Maryland Environmental Science. The program owns six anemometers, four of them are 30-meter towers and two are 50-meter towers. The site must have one acre of space, a 60ft diameter for a 30-meter tower and a 110ft diameter for a 50-meter tower. The location must be flat and have good soil along with favorable topography. The owner is also responsible for obtaining any and all permits. Applicants are recommended to use the Maryland Online Wind

Calculator because it allows the applicant to enter the address of the site in order to determine if the location is in a strong wind region. The program requires that applicants submit a SWG quote from a company before applying.

Contact: Joe Cohen
Phone: (410) 260-7751

Loan Program Page:
http://energy.maryland.gov/incentives/residential/anemometerloan/index.asp
Loan Program Application:
http://energy.maryland.gov/incentives/residential/anemometerloan/documents/MDAnemometerLoanApplication.pdf
Online Wind Calculator:
http://energy.maryland.gov/facts/renewable/wind/wind_calculator/OnlineWindCalc.asp

3) Michigan

The Michigan State Anemometer Loan Program was formed by the Department of Energy's Midwest Regional Office. Both Michigan State University Extension and the Michigan Agricultural Experiment Station administer the loan program. Applicants must own the property site and anemometers are only loaned to farms or agriculture related businesses. Applicants are asked to provide $25 with the application and pay $250 if they are selected in order to cover part of the installation. The borrower is responsible for exchanging the anemometer's batteries and 2 data plugs quarterly and the site must have an accessible road. If the site has strong wind potential, the 30-meter NRG Wind Explorer anemometer tower will be installed for 13 months. The site must have good soil along with favorable topography. The applicant is asked to submit a sketch of the site that includes neighboring structures, roads, trees and the location of the power grid.

Contact: Eric Wittenberg
Email: wittenbe@msu.edu

Loan Program Page:
http://web1.msue.msu.edu/wind/
Loan Program Description and Application:
http://web1.msue.msu.edu/wind/anemloan3.pdf

4) New Jersey

The New Jersey Regional Anemometer Grant Program is sponsored by the U.S. Department of Energy's Wind Powering America Initiative and receives funds from the NJ Board of Public Utilities Office of Clean Energy Program. The loan program is run by five different New Jersey colleges which are Rutgers, Rowan University, Richard Stockton College, Ocean County Community College and The College of New Jersey. The anemometer is loaned for a period of 12 months and applicants choose which college they would like to complete the loan with. Each college is listed as having a specific target market. At least 6 anemometers have been installed. One anemometer was installed atop the Stanley Theater in Jersey City. Unfortunately, the data results stated that the site was not suitable for a wind turbine. The study

did mention that a VAWT might function at the site due to its 30% turbulence intensity level. There is not an online application on the webpage so applicants must contact the colleges directly.

Contact: Michael Muller (Rutgers, the State University)
Email: muller@caes.rutgers.edu

Loan Program Page:
http://www.njcleanenergy.com/renewable-energy/technologies/wind/small-wind-systems/anemometer-loan-program
Anemometer PowerPoint Report: (Stanley Theater Data on slides 12-19)
http://www.njcleanenergy.com/files/file/Committee%20Meeting%20Postings/Wind/Anemometer_Presentation_Rutgers_jtk.pdf

5) Oregon

The anemometer loan program is conducted by the Energy Resources Research Laboratory at Oregon State University. The anemometers are leased for one year and anyone who is a customer of either Portland General Electric or Pacific Power can apply. The anemometers are 20-meter NRG Wind Explorers and applicants are responsible for exchanging the data plugs and batteries monthly. Currently, the program has stopped accepting applications.

Contact: Phil Barbour
Phone: (541) 737-7022
Email: Barbourp@engr.orst.edu

Loan Program Page:
http://mime.oregonstate.edu/alp/index.html

6) Utah

The Utah Anemometer Loan Program is sponsored by the U.S. Department of Energy's Wind Powering America Initiative. The person applying must be the owner of the site in order to qualify and it must be located in the state of Utah. An area of 100ft x 100ft must be available with road access. The two application dates for 20-meter and 50-meter tower anemometers are in March and August. The installation costs for a 50-meter tower range from $4,000-5,000 and are paid by the applicant. Installation for a 20-meter tower is free. Sites should have both favorable wind conditions and good topography. Preference is given to sites with proximity to past anemometer locations. The property owner is responsible for replacing the anemometer batteries and data plugs. Prior to the application, any necessary permits should be attained and applicants are recommended to review the Utah wind map (http://geology.utah.gov/sep/wind/maps.htm) to identify if the site is located in a promising wind area.

Phone: (801) 537-3365

Loan Program Page:
http://geology.utah.gov/SEP/wind/anemometerdata/index.htm

20-meter Tower Application:
http://geology.utah.gov/SEP/wind/anemometerdata/pdf/20meter.pdf

7) Virginia

The Virginia State Based Anemometer Loan Program was developed by the Department of Energy's Philadelphia Regional Office with the assistance of James Madison University. James Madison University conducts the entire program and is responsible for reviewing applications, installing the anemometer and recording data. The applicant must own the site and it must be located in Virginia. The borrowing process consists of an application, a loan agreement, installation, data chip exchange and schedule for removal. The owner must agree to replace the battery and data chip every month. The data chips are sent by mail to the University. The site must have access to a road and have good wind conditions. The anemometer is a NRG 50-meter Tall Tower kit that comes with two vane anemometers and a data logger. The anemometer is loaned for a period of 13 months and James Madison University is not liable for any damages. James Madison University reserves the right to show the anemometer to third parties. Lastly, the owner is responsible for obtaining any necessary permits and he/she has to select a SWG that will be installed if the anemometer readings prove successful.

Contact: Patrick Wilson
Phone: (540) 568-8754
Email: wilsonpr@jmu.edu

Loan Program Document:
http://sbalp.cisat.jmu.edu/documents/Loan%20Description.pdf
Loan Program Agreement:
http://sbalp.cisat.jmu.edu/documents/50-m_loan_option_agreement_081108.pdf

8) Wyoming

The Wyoming State Energy Office runs the anemometer loan program. There are 14 anemometers in the program, 11 of them are 50-meter towers, 2 are 30-meter towers and 1 is a 20-meter tower. The anemometers are loaned for 12 months after the landowner has acquired all the necessary permits. The owner has to pay $4,700 for a 50-meter tower but the 30-meter and 20-meter towers are free. The goal of using a 50-meter tower is to allow the landowner to negotiate with commercial wind developers for large scale wind production. The 30-meter and 20-meter anemometers are used to determine if a SWG is suitable for private use. All the data that is collected is made public. Applicants must contact the program director in order to apply.

Contact: Ben Avery
Phone: (307) 777-2863

Loan Program Page:
http://www.wyomingbusiness.org/business/energy_anemometer.aspx

Attachment C

Office of the Mayor
City & County of San Francisco

Gavin Newsom

Executive Directive 08-08
Wind Power
July 17, 2008

By virtue of the power and authority vested in me by Section 3.100 of the San Francisco Charter to provide administration and oversight of all departments and governmental units in the executive branch of the City and County of San Francisco, I do hereby issue this Executive Directive to become effective immediately:

The City and County of San Francisco is committed to providing leadership on energy, environmental and public health issues by implementing and promoting clean, renewable energy generation projects that improve the lives of San Francisco's residents.

An opportunity exists for the City and County of San Francisco to foster continued economic growth and provide environmental leadership by incorporating sustainable energy generation for City buildings and encouraging the development of clean energy sources in the private sector.

Conditions in many neighborhoods of San Francisco are suitable for small or medium-scale wind power generation turbines. The widespread adoption of wind and other renewable energy and energy efficiency technologies would result in significant long-term benefits to our environment and economy, including reduction in polluting fossil fuel power generation, reductions in carbon dioxide, nitrogen oxides, and particulate emissions and smog generation, and the fiscal and environmental impacts resulting from the expansion of these infrastructures.

Wind and other renewable energy and energy efficiency technologies would go toward helping the City meet the renewable energy, energy efficiency, and CO2 reduction targets set in the Energy Resource Plan and Climate Action Plan. I am herby calling for the following actions:

1. **The Department of Building Inspection and Planning Department shall expedite permitting and minimize costs for the installation of residential, commercial and municipal wind generation turbines in the City; and**

2. **All City Departments shall make every effort to advance wind power generation by incorporating wind turbines into the design of existing and new City facilities whenever and wherever possible.**

Nothing in this Order shall be construed to confer upon any City agency decision-making authority over substantive matters within another agency's jurisdiction, including any informational and public hearing requirements needed to make regulatory and permitting decisions.

Gavin Newsom
Mayor

1 Dr. Carlton B. Goodlett Place, Room 200, San Francisco, California 94102-4641
gavin.newsom@sfgov.org • (415) 554-6141

Attachment D

SAN FRANCISCO
PLANNING DEPARTMENT

D R A F T M E M O

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

TO: Friends of Small Wind Generators

FROM: Craig Nikitas, Senior Planner, 415/558-6306

COPIES: Director John Rahaim, Zoning Administrator Lawrence B Badiner

DATE: October 22, 2008

SUBJECT: Permit Application and Review Process

The Department will use the following standards for the review of applications to install small wind generators ("SWGs") on private property over which the Department has jurisdiction:

HEIGHT LIMITS:

The maximum allowable height for SWGs installed in the buildable area of a lot shall be the height mapped for the subject district plus the exemption allowed under Planning Code Section 260(b)(1)(A), generally an additional ten feet in height districts 65 feet or less, and an additional 16 feet in height districts above 65 feet. Such heights shall be measured in accord with the provisions of Section 102.12 and Article 2.5.

The Zoning Administrator may consider variances for installations of SWGs outside the buildable area of lots, but only to the mapped height, and only upon demonstration that the five required Variance findings are made, including that construction within the buildable area is infeasible, and that the proposal is in general conformity with the Priority Policies of Section 101.1(b).

PUBLIC NOTIFICATION:

For projects located in Zoning Districts where public notification of the application is required by Code or policy, the Project Sponsor shall submit the required fees, mailing labels and other materials, and shall post the project as required. Generally, in RH (Residential – House), RM (Residential – Mixed), NC (Neighborhood Commercial) and other districts, a 30-day notification is required.

Such notification may result in requests for Discretionary Review hearings before the Planning Commission, even for "as-of-right" projects.

DESIGN GUIDELINES:

The project sponsor should balance SWG placement decisions that maximize power production with consideration of visual and noise impacts from the

installation. Generally, the Department will encourage placement to minimize visibility of the installation from public rights-of-way, and minimize architectural, noise, and other impacts on the surrounding structures and neighborhood character.

HISTORIC RESOURCES:

Projects proposing addition of SWGs to structures that have been determined to be historic resources may under go additional review to ensure that the Secretary of the Interior Standards for the Treatment of Historic Properties are met.

Buildings with status under Article 10 (Landmarks and Historic Districts) and Article 11 (Structures of Importance in the Downtown) may require additional Landmarks Preservation Advisory Board and/or Planning Commission hearings.

ENVIRONMENTAL REVIEW:

In general, most small scale wind installations could be determined to be Categorically Exempt from environmental review if there were no anticipated historic, noise, or wildlife impacts.

Wind generating equipment can have some noted effects, which include the possibility of avian and bat mortality caused by collisions with moving parts. This is especially important in consideration of the siting of large, multi-turbine facilities ("wind farms"). The California Energy Commission and private contractors have produced copious research on the causes and measurement of avian fatalities, and have also published recommendations to reduce mortality to flying animals in large-scale installations.

While we have been unable to retrieve any scientific research on the effects of small-scale residential turbine installations on flying animals in urban areas, the application of basic principles outlined in the broader research on large-scale sites would provide some guidance.

Vertical axis type turbines have a solid appearance at low and high speeds. Installation to vertical axis machinery, rather than the horizontal axis type with vertical propeller blades, would reduce the risk of bat and avian mortality. It is thought that the latter types, when rotating with certain tip speeds, are not perceived as obstacles to flying animals, and result in impact and injury to them.

After further study, the Planning Department may recommend restrictions on certain wind equipment in areas with a high density of avian or bat life, where these animals are engaged in migration, nesting, foraging, or roosting activities,

unless extensive specific environmental review is conducted that demonstrates the project could have no significant negative impacts on the environment.

CONDITIONS OF APPROVAL:

The Department will develop SWG Siting and Installation Guidelines. The Guidelines may include standard conditions of approval, required to be recorded as a Notice of Special Restrictions on the property records. Those conditions would memorialize requirements regarding the control of animal mortality, off-site noise, and perhaps, requirements for data-reporting on local wind and power-generation efficacy.

Attachment E

ADMINISTRATIVE BULLETIN

NO. AB-004

DATE : October 15, 2008 [Supersedes Administrative Bulletin AB-004 originally issued 10/6/06, updated 1/1/08 for code references]

SUBJECT : Permit Processing and Issuance

TITLE : **Priority Permit Processing Guidelines**

PURPOSE : This bulletin establishes guidelines to assure that permit applicants receive equal treatment and that permits are reviewed in the order received by the Department of Building Inspection except for certain designated priority applications.

It is the intent of the Department of Building Inspection that the permit review process proceed in an orderly, fair and efficient manner with sufficient flexibility to allow the reasonable resolution of problems that may occur on a day-to-day basis. This bulletin is issued in conjunction with similar bulletins from the Department of Public Works and the Planning Department.

REFERENCES : 2007 San Francisco Building Code, Section 106A, Permits.
San Francisco Campaign and Government Conduct Code, Section 3.400 "Permit Application Processing".
Ethics Commission "Permit Processing Code of Conduct".
San Francisco Planning Department, Director's Bulletin #2006-02.
Department of Public Works, Director's Order #175,487.

DISCUSSION : This Administrative Bulletin provides guidelines for the implementation of legislation adopted by the Board of Supervisors to assist City permitting departments in assuring that no appearance of, or actual, preferential treatment is given to any permit applicant. Policy is adopted in accordance with the requirements of San Francisco Campaign and Government Conduct Code Section 3.400, effective December 15, 2004, and supplements the Permit Processing Code of Conduct adopted by the Ethics Commission on January 10, 2005.

These procedures relate to assignment, initial processing, review and issuance of permit applications; as well as to permit revisions, addenda, and corrections submitted to the Department of Building Inspection subsequent to initial permit application.

General Policy: In accordance with the City's adopted "Permit Application Processing" regulations, the Department of Building Inspection has determined that there is a compelling public policy basis to provide priority review and issuance for each of the following designated types of permit applications.

Department of Building Inspection employees are encouraged to exercise reasonable judgment in all permit review and issuance activities in order to fulfill our customer service responsibilities. This exercise of reasonable judgment by employees is considered an important component in meeting the intent of the legislation to avoid preferential treatment. In all cases when questions arise regarding potential issues of preferential treatment, employees are required to consult with their supervisors.

PROCEDURES

Subject to the reasonable judgment of employees, permit applications shall be logged-in, separated into various permit types, assigned to staff for review, and reviewed in the order in which they are received, except for certain designated priority permits as detailed below. The Department of Building Inspection may assign as many different permit types as necessary to assure the efficient operation of that department. For example, the Department of Building Inspection may separate permits for one type of work, such as office tenant improvement construction, from other types of work, such as re-roofing or new building construction.

Case A addresses initial permit submittal, assignment, review and issuance. Following such initial priority action, permit applications may be placed on hold, routed to other divisions or other City agencies, issued, cancelled, or expired pursuant to other code requirements and other adopted policies and procedures.

Case B addresses issues related to priority processing of permit revisions and of other materials submitted after initial permit acceptance and review, as well as to issues related to final processing and issuance of permits.

Case A - Applications for Permits

Permit applications for the following types of work may, upon request of the permit applicant, be given priority assignment for plan review and issuance:

1. Permit applications for necessary emergency work to secure the health or safety of building users or the public, either on private property or on the public right-of-way;

2. Permit applications for work on City owned or City leased properties when such priority permit review is specified in a written agreement between the Department of Building Inspection and such other City agencies;

3. Permit applications for work consisting solely of disabled access improvements;

4. Permit applications for work consisting solely of solar photovoltaic systems;

5. Permit applications for work consisting solely of wind power generation systems;

6. Permit applications for work to voluntarily upgrade soft-story, wood-frame buildings to improve building performance in earthquakes;

7. Permit applications principally for maintenance or preservation of designated historic buildings and/or sites;

8. Permit applications for building construction projects that meet or exceed a Gold Rating (very high efficiency "green building" projects) using the LEED Building Rating System® adopted under the Leadership in Energy and Environmental Design program of the U.S. Green Building Council or other approved "green building" guidelines. Compliance with green building standards is to be assured through conformance with "Performance Assurance for Green Buildings" requirements noted below;

9. Permit applications for projects that provide new affordable housing (meeting the affordability levels defined in Planning Code Section 315 and in the Procedures Manual adopted by the Mayor's Office of Housing) in 100% of the on-site dwelling units. Conformance with these standards shall be confirmed by Planning Department staff;

10. Permit applications to respond to a delay caused by an earlier procedural error by a City agency in processing the permit or processing another permit for the same project;

11. Permit applications submitted to comply with Notices of Violation, abatement notices, or any other official Department of Public Works, Planning Department or Department of Building Inspection enforcement or abatement notices which require immediate action; or

12. Permit applications for other work for which, in the reasonable judgment of the Director of the Department of Building Inspection, urgent or extraordinary circumstances exist that would lead to a significant public benefit or necessity, when such circumstances are documented in written findings.

Case B - Revisions and Addenda to Permits

Subject to the reasonable judgment of staff, revisions and other materials submitted to the Department of Building Inspection during the permit review process must be reviewed in the order in which they are received, except as detailed below. Such submittals may include revisions, corrections, addenda, and other permit materials. Exceptions to the strict chronological review and processing sequence are allowed and permit submittal documents may be given priority review, upon request of the permit applicant, when any of the following conditions is met:

1. Permits meet the priority permit qualifications of Case A, above;

2. Permit revisions are submitted pursuant to a decision of the Building Inspection Commission, Board of Appeals, Board of Supervisors, or other review or appeals body where such body has directed that the permit revisions be given priority review, or where required revisions are minor in nature and would not require substantial time to review and process;

3. Revisions, corrections or other submittals are minor in nature and would not require substantial time to review and process;

4. Revisions, addenda and other permit submittals for work in which, in the reasonable judgment of the Director of the Department of Building Inspection, urgent or extraordinary circumstances exist that would lead to a significant public benefit or necessity, when such circumstances are documented in written findings.

Documentation of Priority Processing

Priority processing for permits meeting the above criteria is to be undertaken at the request of the permit applicant. All cases of priority permit application processing shall be documented using a standard form, Documentation of Findings for Priority Permit Processing (Attachment A), that includes written findings of conformity with one of the priority types described in this bulletin. This document shall be prepared and submitted by the applicant. Department of Building Inspection, Division managers may approve the form where the permit is in clear conformity with the standards for priority processing. All other requests for priority permit processing should be reviewed and approved by a Deputy Director or other senior manager.

One copy of the form approving priority permit processing shall remain with the application, one copy shall be microfilmed or otherwise retained as part of the approved permit documents, and the original shall be retained in a chronological file in the office of the Deputy Director for Permit Services or in another designated location and shall be available for review by any person at any time during normal Department working hours. Permit applications that are approved for priority processing should be so noted in the Department of Building Inspection's permit tracking system.

Performance Assurance for Green Buildings

Where priority processing for a permit application is requested for building construction projects that meet or exceed a LEED Building Rating System® Gold rating or other approved "green building" program, such permit applications must be accompanied by an agreement in a form prepared and executed by the Department of the Environment. The agreement shall be accompanied by the LEED® or other approved checklist that specifies the elements of the project required to obtain the required rating. As part of the application process, the applicant shall meet with a designated SF Green Team, comprising technical staff from the affected reviewing agencies, to confirm that the project complies with all requirements. Plan review fees per San Francisco Building Code Section 110, Table 1-B will be charged on an hourly basis for all SF Green Team staff time related to an individual project.

The applicant's obligations under this agreement shall be memorialized as Conditions of Permit Approval, which shall become part of the approved permit documents and shall be recorded with the County Recorder's Office in a form approved by the Director. Conditions of permit approval shall require that the project's site permit application or other permit application(s) be accompanies by a Design Phase Certification from the U.S. Green Building Council, and that a final LEED® Gold Rating Certification be obtained within six months of issuance of the Certificate of Occupancy, Certificate of Final Completion, or permit sign-off. The Director may approve alternate documentation and compliance programs to confirm that all required work is properly completed.

Quality Assurance Procedures

The assignment of permit applications for priority review and these procedures shall be reviewed by the Department of Building Inspection on an annual basis to confirm that the intent of this policy is being fulfilled and to make changes as necessary to optimize the efficient and fair operation of the permit process.

Approved by Building Inspection Commission
October 15, 2008

Vivian L. Day, C.B.O.
Acting Director
Department of Building Inspection

Attachment A:	Documentation of Priority Permit Processing
Attachment B:	SF Campaign and Governmental Conduct Code, Section 3.400
Attachment C:	Permit Processing Code of Conduct
Attachment D:	Planning Department, Director's Bulletin #2006-02
Attachment E:	DPW Director's Order #175,487

ATTACHMENT A

DEPARTMENT OF BUILDING INSPECTION
City & County of San Francisco
1660 Mission Street, San Francisco, California 94103-2414

Documentation of Findings for
Priority Permit Application Processing

This form shall accompany all requests for priority processing of permit applications. A copy shall be maintained in the office of the Deputy Director for Permit Services, a copy shall accompany the permit application, and a copy shall be recorded as a permit document

Note: Boldface items are to be completed by the Permit Applicant.

Received Date: _____ Time _____

Permit Application # _____

Property Address: _____

Block and Lot: _____/_____ **Occupancy Group:** _____ **Use:** _____

Description of Proposed Work

_____

_____

_____

I hereby declare that the information provided is accurate to the best of my knowledge and that I intend to undertake and complete the project described herein in compliance with the requirements for Priority Permit Processing detailed in DBI Administrative Bulletin AB-004.

_____ _____
Signature of Applicant **Date**

_____ _____
Print Name of Applicant **Phone Number**

Findings/Basis for Priority Permit Review (based on AB-004)

Case A, Case B, Other (circle one) Item # _____

Comments/Findings: _____

_____

_____

_____

_____

Approved by: _____
Signature of DBI Supervisor or Manager

_____ _____
Print Name and Title Date

ATTACHMENT B

THE SAN FRANCISCO CAMPAIGN AND GOVERNMENTAL CONDUCT CODE

CHAPTER 4: PERMIT APPLICATION PROCESSING

Sec. 3.400. Permit Application Processing.

SEC. 3.400. PERMIT APPLICATION PROCESSING.

(a) EQUAL TREATMENT OF PERMIT APPLICANTS. It shall be the policy of the Department of Building Inspection, the Planning Department, the Department of Public Works and the officers and employees of such departments to treat all permit applicants the same regardless of the relationship of the applicant and/or the applicant's representatives to any officer or employee of the City and County and regardless of whether the applicant hires a permit consultant to provide permit consulting services. Intentional preferential treatment of any permit applicant and/or the applicant's representatives by any officer or employee of the Department of Building Inspection, the Planning Department, or the Department of Public Works shall subject the officer or employee to disciplinary action for official misconduct.

(b) APPLICATION PRIORITY. It shall be the policy of the Department of Building Inspection, the Planning Department, the Department of Public Works and the officers and employees of such departments to review, consider, and process all applications, revisions, corrections and other permit-related material in the order in which that type of material is received unless there is a written finding of a public policy basis for not doing so, such as the involvement of public funds in the project for which the permit is sought, or the response to a delay caused by an earlier procedural error in processing the permit or another permit for the same project. Absent such a finding, any officer or employee of the Department of Building Inspection, the Planning Department, the or Department of Public Works who intentionally fails to review, consider and process all applications, revisions, corrections and other permit-related material in the order in which that type of material is received shall be subject to disciplinary action for official misconduct. The Department of Building Inspection, the Planning Department, and the Department of Public Works shall each adopt written guidelines for determining when there is a public policy basis for processing permit material out of order.

(c) PERMIT PROCESSING CODE OF CONDUCT. No later than 60 days after the effective date of this Article, the Ethics Commission shall adopt a code of conduct for permit processing (the "Permit Processing Code of Conduct") containing ethical guidelines for permit applicants, permit consultants, and officers and employees of the Department of Building Inspection, the Planning Department, the and Department of Public Works. The Permit Processing Code of Conduct shall be posted in a conspicuous place in each department, and a copy shall be distributed to each officer of the City and County who makes or participates in making decisions related to permit applications.

(d) EFFECTIVE DATE. The provisions of this Section shall take effect December 15, 2004. (Added by Ord. 115-04, File No. 040907, App. 7/1/2004)

ATTACHMENT C

ETHICS COMMISSION
CITY AND COUNTY OF SAN FRANCISCO

Permit Processing Code of Conduct
(adopted by Ethics Commission January 10, 2005)

Preamble

The people of San Francisco are entitled to fair and equitable processes for the review and approval of permit applications by City departments. To this end and pursuant to Section 3.400(c) of the San Francisco Campaign and Governmental Conduct Code, the Ethics Commission adopts this Permit Processing Code of Conduct to guide the Department of Building Inspection, the Planning Department and the Department of Public Works, and members of the public who use their services.

For the Staff

As an employee or officer working on matters related to permits issued by the Department of Building Inspection, the Planning Department or the Department of Public Works, I will be honest in my dealings with permit applicants, permit consultants, members of the public and my colleagues. I will enforce compliance with Building, Planning and Public Works Codes and requirements in a consistent manner.

For the Public

I will be sensitive to the fact that officers and employees of the City must adhere to laws and rules that govern their conduct and I will respect their procedures. I will provide full, clear and accurate information to the officers and employees of the City.

ATTACHMENT D

SAN FRANCISCO PLANNING DEPARTMENT

1660 Mission Street, Suite 500 San Francisco, California 94103 www.sfgov.org/planning

DIRECTOR'S BULLETIN No. 2006-02

DATE : September 28, 2006 (Revised)

TITLE : **Planning Department Application Processing Guidelines**

PURPOSE : **This Bulletin provides Planning Department guidelines to ensure that no appearance of or actual preferential treatment is given to applicants, except for certain priorities identified in this policy, in accord with legislation adopted by the Board of Supervisors.**

The guidelines established herein are meant to ensure that all project applicants receive equitable treatment, and that the Planning Department reviews applications in the order received, except for certain designated priority applications described below. This is in accordance with the requirements of San Francisco Campaign and Government Conduct Code Section 3.400, effective December 15, 2004, and with the Permit Processing Code of Conduct adopted by the Ethics Commission on January 10, 2005.

This Bulletin is issued in conjunction with similar Bulletins from the Department of Public Works and the Department of Building Inspection. It is the intent of the Departments implementing this policy that the review of applications be conducted in an orderly, fair and efficient manner, yet with sufficient flexibility to allow the resolution of problems that may occur in the course of the process.

REFERENCES: Ordinance 115-04
San Francisco Campaign and Government Conduct Code, Section 3.400 "Permit Application Processing"

DISCUSSION:

These policies and procedures relate to assignment, initial processing, review and analysis of all project applications, and to revisions, addenda and corrections submitted subsequent to initial applications. In general, the Planning Department will process applications of all types in the chronological order received. However, because the Department's organizational structure utilizes geographic sections that have different workloads and staffing levels, applications that were filed consecutively may have different processing times. Further, under the guidelines provided herein, some applications may be expedited in order to advance identified policy goals of the City, or to remedy procedural errors.

PRIORITY CRITERIA

All applications received by the Planning Department shall be assigned, reviewed, and completed in the order received, except in the following cases:

Type 1: Applications for Green Buildings

Building construction projects that meet or exceed a Gold Rating using the LEED Building Rating System® adopted under the Leadership in Energy and Environmental Design program of the U.S. Green Building Council (or that achieve high sustainability standards under other "green building" rating systems approved by the Director) qualify as Type 1 Applications.

Type 2: Applications for Certain Affordable Housing Projects

Applications for projects that provide new affordable housing in 100 per cent of the on-site dwelling units (where such units are rented or sold at the economic levels defined in Planning Code Section 315 and in the Procedures Manual adopted by the Mayor's Office of Housing) qualify as Type 2 Applications.

Type 3: Applications for Large Grocery Stores

Applications to construct retail grocery facilities with gross floor areas of 25,000 square feet or larger qualify as Type 3 Applications.

Type 4: Other Applications

Type 4 Applications are those requiring review for:

1. Necessary emergency work to secure the health or safety of building users or the public, either on private property or on the public right-of-way, as determined by the Director.

2. Work consisting solely of disabled access improvements.

3. Work consisting solely of maintenance or repair of designated historic buildings and/or sites that are subject to the requirements of Article 10, or defined as Category I or II buildings in Article 11, of the Planning Code.

4. Work consisting solely of the installation of renewable energy features.

5. Work consisting solely of applications previously delayed due to procedural errors by a City agency in processing the application.

6. Work solely to comply with official Department of Public Works, Planning Department, or Department of Building Inspection actions to abate public nuisances as identified by those Departments.

7. Work on City owned or leased properties when such priority application review is specified in a written agreement between the Planning Department and such other City agencies.

8. Revisions and corrections that are minor in nature and would not require more than one staff-hour to review and process.

9. Submittals of applications, revisions and addenda pursuant to decisions of the Planning Commission, the Board of Appeals, the Board of Supervisors, or other review or appeals body that are minor in nature and would not require more than one staff-hour to review and process.

10. Applications for other projects, whether administrative or discretionary, for which, in the judgment of the Director, urgent or extraordinary circumstances exist such that review of the application could lead to a significant public benefit or necessity, when such circumstances are documented in written findings.

PROCEDURES FOR TYPE TYPES 1, 2 AND 3

Documentation of Findings for Priority Application Processing

All type 1, 2 and 3 Types of priority application processing shall be documented using a standard form developed by the Planning Department (see Attachment A) that includes written findings of conformity with one of the Types described above. This document shall be prepared and submitted by the applicant.

A copy of the documentation of priority processing shall remain with the Planning application, and the original shall be maintained in a chronological file under the supervision of the Zoning Administrator's Office and shall be available for review at the Public Information Counter at any time during normal Department working hours.

Applications approved for priority processing shall be so designated in the Department's case editing and permit tracking system(s).

The applicant's obligations to provide the proposed use or features described in the application shall be memorialized as Conditions of Approval, and shall be recorded as Notices of Special Restrictions with the County Recorder's Office, in a form approved by the Zoning Administrator.

Performance Assurance for Green Buildings

Type 1 building construction projects are those that meet or exceed a Gold Rating using the LEED Building Rating System®.[1] The initial application for such projects must be accompanied by an agreement, in a form prepared and executed by the Department of the Environment. The agreement shall be accompanied by the LEED® checklist to specify the elements of the project required to obtain the LEED® Gold Rating, and shall include a processing fee as required by the Department of the Environment. Prior to the Department's determination of acceptance or rejection of the project for Priority Processing, the applicant shall meet with the SF Green Team, comprising technical staff from the affected reviewing agencies, to describe the project.

The applicant's obligations under this agreement shall be memorialized as Conditions of Approval, and shall be recorded as Notices of Special Restrictions with the County Recorder's Office, in a form approved by the Zoning Administrator. Those conditions shall require that the project's site permit application be accompanied by a Design Phase Certification from the U.S. Green Building Council, and that Final LEED® Certification be obtained with a Gold Rating within six months of issuance of the first Certificate of Occupancy, Certificate of Final Completion, or permit sign-off signifying completion, if such certificates are not issued.

1. The LEED® Gold Rating shall apply to New Construction (NC), Existing Building (EB), Commercial Interior (CI) and other categories adapted by the United States Green Building Council.

Assignment and Initial Review Times

For Priority Application Processing of Types 1, 2 and 3, target time lines of two weeks shall be established for assignment (the elapsed time between arrival of an application at the Department and its assignment to and receipt by a Planner). Target time lines of two weeks shall be established for initial review, the elapsed time between assignment, and the planner's first review of the application for project scope and application completeness.

If the volume of qualified applications approved for priority processing and the level of the Department's staffing preclude meeting the required time limits for assignment and/or review, then the Applicant will be informed that the expedited review program has reached its capacity, and will have the option to apply for review under normal time lines, or to have the application placed on a priority review waiting list, until staff becomes available for assignment to a priority application.

Applicants with projects approved for priority processing, who have submitted incomplete applications, shall be notified in writing following initial review. Priority applications, once complete, shall be processed efficiently, with as little delay as possible, based on staff availability.

PROCEDURES FOR TYPE 4

The majority of Type 4 applications may be approved at the Planning Information Counter, and in those instances, no special procedures would be employed. In instances where more detailed review is required, Planners may process Type 4 applications out of order where the project is in clear conformity with the standards for priority processing, or when the project scope is minor in nature and would not require more than one hour to review and process.

When questions arise whether a specific project qualifies for the applicability of those standards to, Planners should refer the priority-processing request to their supervisors for a determination.

QUALITY ASSURANCE PROCEDURES

The assignment of applications for review by the Planning Department shall be subject to periodic review, not less than quarterly, by senior staff as designated by the Planning Director. The Director shall review these procedures on an annual basis, to confirm that the intent of this policy is fulfilled, and to make changes as necessary to optimize the efficient and fair review of applications submitted to the Department.

Approved:
Dean L. Macris
Director of Planning

Attachment A:	Documentation of Findings for Priority Application Processing
Attachment B:	SF Campaign and Governmental Conduct Code, Section 3.400
Attachment C:	Permit Processing Code of Conduct

Attachment A: **SAN FRANCISCO PLANNING DEPARTMENT**
1660 Mission Street, Suite 500 San Francisco, California 94103 www.sfgov.org/planning

Documentation of Findings for Priority Application Processing

This form shall accompany all requests for Priority Application Processing. (NOTE: **Boldface** items to be completed by the Applicant) A copy shall be maintained at the Planning Departments's Planning Information Counter as part of the permanent records of the findings for priority application processing.

Received Date: _____ Time _____

Type &/or Permit Application Nos. _____

Property Address: _____

Block(s) & Lot(s): _____

Zoning: _____ **Height & Bulk District** _____

Bldg Code Occupancy Group: _____ **Proposed Use:** _____

Description of Proposed Work _____

_____

_____

APPLICANT'S DECLARATION: I hereby declare that the information I have provided is accurate to the best of my knowledge and that I intend to complete the project described herein in compliance with the requirements for Priority Processing of Applications described in Director's Bulletin 2006-02.

_____ _____
SIGNATURE OF APPLICANT **DATE**

_____ _____
PRINT NAME OF APPLICANT **PHONE NUMBER**

Findings/Basis for Priority Application Review (conformity with Director's Bulletin 2006-02)

circle Type: 1 2 3 4 Other

Item # & Description _____

Findings: _____

_____

_____

(circle one:) Accepted Rejected by: _____
SIGNATURE OF PLANNER

_____ _____
PRINT NAME OF PLANNER **DATE**

_____ _____
PRINT TITLE OF PLANNER **PHONE NUMBER**

_____ _____
PLANNER(S) ASSIGNED TO APPLICATION(S) Date

ATTACHMENT E

Department of Public Works
Office of the Director
City Hall, Room 348
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4645

DPW ORDER NO. 175,487

ESTABLISHING POLICY AND GUIDELINES FOR DEPARTMENT OF PUBLIC WORKS PERMIT PROCESSING PRIORITY.

I: PURPOSE

The purpose of this Order is to establish guidelines to ensure that permit applicants receive equal treatment, that permits are reviewed in the order received by the Department of Public Works, or reviewed in conformity to a policy that allows for alternative, priority processing of applications. This Order is in accordance with the requirements of San Francisco Campaign and Government Conduct Code Section 3.400, effective December 15, 2004, and supplements the Permit Processing Code of Conduct adopted by the Ethics Commission on January 10, 2005. This Director's Order recognizes the need for a policy that addresses such priority, necessity, efficiency and/or practical feasibility necessary to deliver customer service founded upon a basis of equal treatment to all applicants.

II: REFERENCE

San Francisco Public Works Code
Standing Director's Orders
Ordinance 115-04, Amends San Francisco Campaign and Government Conduct Code, Section 3.400 "Permit Application Processing."

III: MANDATE OF POLICY

This Director's Order provides guidelines for the implementation of legislation adopted by the Board of Supervisors to ensure that DPW, as a City Permitting Department, conducts its operations so that no appearance or actual preferential treatment is given to any permit applicant while allowing for a policy that considers priority, necessity, efficiency, and practical feasibility in the issuance of permits.

IV: PROCEDURAL APPLICABILITY

These procedures relate to assignment of permit applications and initial processing as well as to permit revisions and/or corrections submitted to the Department of Public Works through to the final permit issuance. The Department of Public Works recognizes that strict chronological review is infeasible for all permits following initial acceptance and, further, that employees need to exercise reasonable discretion in all permit review and issuance activities in order to fulfill the Department's customer service responsibilities.

When questions arise regarding this process, employees shall consult with their supervisors. Adherence to this Order allows alternatives to the strict chronological order of permit processing and issuance.

V: GUIDELINES FOR PERMIT PROCESSING AND ISSUANCE

Permit applications shall be entered into the permit database, assigned to staff for review, and reviewed in the order in which they are received in accordance with Rule 1, except as detailed for priority permits as set forth under Rule 2, 3, and 4A & 4B. A determination by Department of Public Works' Senior Staff as to whether priority permit review is acceptable will be made upon request by project sponsors, their representatives, or at such times as the Department becomes aware of a potential priority situation, such as clerical error or cases of less complexity, whereas the applicant's request is not required.

DEFINITIONS:

Rule 1 All permits shall be processed and approved in the chronological order of date and time received.

Following an initial review in accordance with the guidelines established in this Order, permit applications may be placed on hold, routed to other divisions of DPW or other City agencies, issued, or disapproved pursuant to the Public Works Code and other adopted Orders, polices and procedures.

Rule 2 provides a listing of categories of permits eligible for consideration for priority review.

Rule 3 addresses issues related to the priority and review of revisions and of other materials submitted after initial permit acceptance and review, as well as issues related to final processing and issuance of permits.

Rule 4A recognizes the concept of "lesser" permit complexity review requirements and "greater" permit review complexity, including listing types of permits.

Rule 4B allows consideration be given due to the availability of qualified and/or authorized personnel to review and issue permits.

DETAILED INFORMATION:

Rule 1 Permit application, data entry, assignment to staff, and review shall be chronologically assigned for plan review and processing by Department of Public Works staff based on date/time of permit filing, except as detailed in cases below.

Rule 2 Permit applications for the following types of work may be given priority assignment for plan review and issuance. Each such case must be individually evaluated and approved in writing by the DPW Director or his/her designee:

1. Permits for necessary emergency work to secure the health or safety of building users or the public related to or occupying the public right-of-way (PROW).
2. Permits for construction work that utilizes public funds for any part of such work.
3. Permit for work on City-owned or leased properties when such priority permit review is specified in a written agreement between the Department of Public Works and such other City agencies.
4. Permits for work consisting solely for disabled access improvements.
5. Permits for maintenance or preservation of designated historic publicly owned areas.

6. Permits for work in the PROW in conjunction with buildings that meet or exceed LEED rating high efficiency "green" building under the Leadership in Energy and Environmental Design program of the U.S. Green Building Council).

7. Permits to respond to delay caused by an earlier procedural error by DPW in processing the permit or processing another permit for the same project.

8. Permits submitted to comply with Notices of Violation, Orders of Abatement, or any Notices to Repair, other official Department of Public Works enforcement, or abatement notices.

9. Permits for other work for which there is a significant public benefit or necessity.

Rule 3 Revisions and other materials submitted to the Department of Public Works during the permit review process must be reviewed in the order in which such types of materials are received. Such submittal materials include revisions, corrections, addenda, and other materials related to an active permit. Certain exceptions to the strict chronological review and processing sequence are allowed when:

1. Procedural errors by DPW cause a processing delay in the permit review.

2. Materials lost or misplaced by DPW are being replaced.

3. Permit revisions are submitted pursuant to decision of the Board of Appeals or other review or appeals body.

4. Revisions, corrections or other submittals are minor in nature and do not unreasonably delay the review, consideration, or processing of other such materials that are in queue.

5. Revisions for permits for work for which there is a significant public benefit or necessity.

Rule 4A Applications related to the use of the public right-of-way (PROW) encompass more than 22 distinct permits where the process time between review and issuance may vary from minutes to years. "Less" complex permits may be reviewed and issued prior to "greater" complexity as a matter of Department efficiency and service to the public. The following categories classify several DPW permits into the appropriate "lesser" and "greater" groupings based upon typical review times. Permits not listed are subject to Rules 1, 2, and/or 3.

LESSER COMPLEXITY		
Temporary Occupancy	Excavation Side Sewer	Café Tables/Chairs Renewals
Street Space Occupancy Additional Street Occupancy	Underground/Tank Removal	Street-Use Banners
Mobile Storage Container Municipal Excavation Permits	Boring/ Monitoring Well	Minor/Sidewalk Encroachment Related to Existing Conditions
Debris Box Sign Posting Registration	Display Merchandise Renewal	Permit Renewals/Extensions

GREATER COMPLEXITY
Major Encroachment
Sidewalk Underground Vault Encroachment

Rule 4B DPW employees may possess various professional licenses necessary to perform the duties of their job classification. Also, DPW employees are granted differing levels of authority to process and approve a variety of permits. Rule 4B recognizes that the availability of licensed or authorized person may restrict the Department's ability to process and approve a variety of permits in strict chronological order. Thus, this policy allows that permits may be processed and issued considering the availability of authorized personnel to do so.

DOCUMENTATION OF FINDINGS OF BASIS FOR PRIORITY PERMIT PROCESSING

All rules for priority permit processing, except procedural correction, lost document replacement, and Rules 4A and 4B, shall be documented [See Attachment A], including written findings demonstrating conformity to one of the listed provisions. The documentation may be approved only by the Director of the Department of Public Works, a Senior Manager, Deputy Bureau Manager or other designated Staff person. The documentation of priority permit processing shall be maintained in a chronological file at the DPW Permit Manager's Office located presently in Room 460, 875 Stevenson Street. Records are available for review to any member of the public or staff at any time during regular business upon request.

QUALITY ASSURANCE PROCEDURES

The assignment of permit applications for review by Department of Public Works staff shall be subject to periodic monthly review, by a Senior Staff person, Bureau Representative or persons designated by the Director. Documentation of actions that do not conform to this Order, or other procedures issued by the Director, or other official policies of the City shall be investigated and, if deemed appropriate by the Director, disciplinary action shall be taken as detailed in the Civil Service Rules.

APPROVED:
Edwin M. Lee
Director of Public Works

RECOMMENDED:
Barbara L. Moy
Bureau Manager
Street Use and Mapping

RECOMMENDED:
Robert P. Beck
Deputy Director for Engineering

APPROVED: JUNE 22, 2005 EDWIN M. LEE, DIRECTOR

Attachment A: Document of Priority Permit Processing
Attachment B: SF Campaign and Governmental Conduct Code Section 3.400
Attachment C: Permit Processing Code of Conduct

ATTACHMENT A

DEPARTMENT OF PUBLIC WORKS
City and County of San Francisco
875 Stevenson Street, Room 460

Documentation of Findings for Priority Permit Processing

A copy of this form shall be maintained in the DPW Permit Office as part of the permanent records of the findings for priority permit processing at 875 Stevenson Street, Room 460.

Received on Date: _____ Time _____

Permit Application #: _____

Property Address: _____

Block and Lot: _____ / _____ Permit Type: _____ Use: _____

Description of Proposed Work:

_____

_____

_____

Findings/Basis for Priority Permit Review:
Other (circle one) Rule 2, or Rule 3

Item #: _____

Comments: _____

_____

_____

_____

_____

_____

_____

Priority Permit Review Requested By: _____

Approved By: _____

Print name: _____ Title: _____

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Attachment F

Airfoil	The shape of the blade cross section, which for most modern horizontal axis wind turbines, is designed to enhance the lift and improve turbine performance
Ampere Hour	A unit of the quantity of electricity obtained by integrating current flow in amperes over the time in hours for its flow; used as a measure of battery capacity
Anemometer	A device to measure wind speed and direction. The three main types are Cup, Vane and Sonic anemometers
Average Wind Speed	The mean wind speed over a specified period of time
AWEA	American Wind Energy Association
Blade	The aerodynamic surface on a wind turbine that catches the wind
CEC	California Energy Commission
CPUC	California Public Utility Commission
Cut-In Wind Speed	The wind speed at which a wind turbine begins to generate electricity
Cut-Out Wind Speed	The wind speed at which a wind turbine ceases to generate electricity
CWEC	California Wind Energy Collaborative
DAWT	Ducted Axis Wind Turbine
DBI	San Francisco Department of Building Inspection
Density	Mass per unit of volume
EERE	DOE's Energy Efficiency and Renewable Energy Program
ERP	Emerging Renewables Program
GHG	Green House Gases
Grid	The utility distribution system. The network that connects electricity generators to electricity users
HAWT	Horizontal Axis Wind Turbine
Inverter	A device that converts direct current (DC) to alternating current (AC)
kW	KiloWatt, a measure of power for electrical current (1000 Watts)
kWh	KiloWatt-hour, a measure of energy equal to the use of one kilowatt in 1 hr.
Micro Wind	Turbines that have less than 1kW capacity as defined by AWEA
MW	Megawatt, a measure of power (1,000,000 Watts)
NREL	National Renewable Energy Laboratory
PG&E	Pacific Gas & Electric
PIER	CEC's Public Interest Energy Research Program
Power Curve	A chart showing a wind turbine's power output across a range of wind speeds
Rated Output Capacity	The output power of a wind machine operating at the rated wind speed
Rated Wind Speed	The lowest wind speed at which the rated output power of a wind turbine is produced
Rotor	The rotating part of a wind turbine, including either the blades and blade assembly or the rotating portion of a generator
Rotor Diameter	The diameter of the circle swept by the rotor
Rotor Speed	The revolutions per minute of the wind turbine rotor
SFE	San Francisco Department of the Environment
SFPUC	San Francisco Public Utilities Comission
SGIP	Self Generation Incentive Program
Small Wind Turbine	Turbines that are used for individual homes, farms and small businesses that have a rated capacity of 100 kilowatts or less as defined by AWEA
Start-Up Wind Speed	The wind speed at which a wind turbine rotor will begin to spin (See also Cut-In Wind Speed)
SWCC	Small Wind Certification Council
SWG	Small Wind Generators
Urban Wind	Wind energy appropriate for urban environments
VAWT	Vertical Axis Wind Turbine