

Aids to Navigation

**Programmatic Biological Evaluation
Aids to Navigation
Version: 13 October 2000**

1. Summary of Activity:

a. In all Fresh Waters *excluding* Columbia River mainstem: Placement of navigation aids and regulatory markers, including placement of buoys for such purposes, provided that: buoys and anchors are not located over or adjacent to vegetated shallows (except where such vegetation is limited to State-designated noxious weeds) or spawning habitat for listed or proposed fish species, no trenching occurs through any water of the U.S. (i.e., for electrical cables), no new piling is placed, if a barge is used, the barge does not ground out, flotation shall be completely contained to prevent breakup, and buoys are anchored securely and anchors are installed so that anchor lines do not drag. [from NWP 1]

b. In the Columbia River mainstem *including* Snake River and Baker Bay: Placement of navigation aids and regulatory markers, including placement of buoys for such purposes, provided that: buoys and anchors are not located over or adjacent to vegetated shallows (except where such vegetation is limited to State-designated noxious weeds) or spawning habitat for listed, proposed or forage fish species, no trenching occurs through any water of the U.S. (i.e., for electrical cables), no new piling is placed, if a barge is used, the barge does not ground out, flotation shall be completely contained to prevent breakup, and buoys are anchored securely and anchors are installed so that the anchor lines do not drag. [from NWP1]

c. In Marine/Estuarine Waters *excluding* Baker Bay: Placement of navigation aids and regulatory markers, including buoys and up to one new pile or one new dolphin (3 piles) for such purposes, provided that: work is done within the approved work window; structures are not located over or adjacent to vegetated shallows; no trenching occurs through any water of the U.S. (i.e., for electrical cables); the pile is not treated with creosote or pentachlorophenol; all piling or dolphins are capped with a device to preclude perching by piscivorous birds; if a barge is used, the barge does not ground out and the barge is not over or adjacent to vegetated shallows (except where such vegetation is limited to State-designated noxious weeds); and buoys are anchored securely and anchors are installed so that the anchor lines do not drag. [from NWP 1]

2. Programmatic Description: Individual permits (IPs), letters of permission (LOPs), and Nationwide Permit 1 (NWP 1) may authorize the placement of aids to navigation and regulatory markers into navigable waters of the U.S in the State of Washington. This programmatic biological evaluation applies only to such activities where the placement will be via buoys, a single pile, or a single 3-pile dolphin. Work that cannot be designed or constructed to fit under this biological evaluation must go through individual informal or formal ESA consultation.

3. Project Location: In all navigable fresh and marine/estuarine waters only in the counties of Washington State where the National Marine Fisheries Service and U.S. Fish and Wildlife Service have concurred that the project is not likely to adversely affect listed fish species and designated critical habitat and will not jeopardize proposed fish species or destroy or adversely modify proposed critical habitat.

4. Project Description: This programmatic biological evaluation does not cover any interrelated and/or interdependent work activities in any of the designated critical habitat areas, except those activities distinctly specified.

a. In all Fresh Waters in Washington State *excluding* Columbia River mainstem: Placement of navigation aids and regulatory markers, including placement of buoys for such purposes. These may include lights, traffic signs (e.g. “slow wake”), and the like. However, this informal consultation does not cover placing piling into freshwater.

b. In the Columbia River mainstem in Washington State *including* the Snake River and Baker Bay: Placement of navigation aids and regulatory markers, including placement of buoys for such purposes. These may include lights, traffic signs (e.g. “slow wake”), and the like. However, this informal consultation does not cover placing piling into the Columbia River mainstem, Snake River or Baker Bay.

c. In Marine/Estuarine Waters in Washington State *excluding* Baker Bay: Placement of navigation aids and regulatory markers, including buoys and up to one new pile or one new dolphin (three piles) for such purposes. including placement of buoys for such purposes. These may include lights, traffic signs (e.g. “slow wake”), and the like. However, this informal consultation does not cover any associated trenching or cable placement for lighting on the aid or regulatory marker. A generator or battery attached to the pile or dolphin is allowable to provide necessary power.

5. Project Construction Description: ¹

¹ Information about project construction methods provided by personal communication with John Pell, Navigation Expert, Corps of Engineers, Regulatory Branch, and Eric Winters, Chief of Floating Plan, Corps of Engineers, Navigation Branch on February 16, 2000.

a. Placement of buoys as aids to navigation: Buoy placement whether in freshwaters, the Columbia River, or marine waters is relatively the same.

1. Equipment used: The equipment used is the vessel to place the buoy (discussed under access); for small buoys, the buoy is a maximum of 4-foot radius (some as small as 1 foot radius), the anchor is made of fully cured concrete or steel, with a maximum weight of 1 ½ tons and a maximum size of 4 cubic yards, the line from anchor to buoy is either a combination of chain and nylon rope or chain and cable; for large buoys, the buoy is an average of 6-foot radius; the anchor is made of a fully cured concrete or steel (for steel sometime a regular boat anchor is used) up to 6 tons in weight and 10 cubic yards in size; the line from anchor to buoy is a large anchor chain or a combination of chain and cable. The buoy is made of either steel encased in close cell Styrofoam (plastic coating to ensure no water leakage), steel with a Styrofoam or other floatation material inside, or close cell Styrofoam only. The length of line for small or large buoys varies based on the scope needed. The scope refers to the ratio of length to depth based on currents in the waterbody. The average scope is a ratio of 5:1 line length to depth.

2. Access: Access to the buoy location is from a “Buoy Tender” or barge. A “Buoy Tender” is an open decked vessel with a mounted crane used for buoy placement. The buoy tender is at a minimum 65 feet in length. Barges may be as long as 500 feet. The length of barge used depends on the depth of buoy placement and size of buoy. For smaller buoys, a smaller vessel averaging 22 feet in length may be used.

3. Placement: The buoy is placed at a minimum depth of 10 feet at low water (fresh or marine). The maximum depth could be as much as 2,000 feet or more, such as for federal navigation channel markers in the Straits or Puget Sound. For typical placement of larger buoys from a buoy tender, the anchor is connected to a “trip wire” or “chalk” (a tripping device) on the side of the boat, the chain/nylon rope is “faked” or folded back and forth along the deck of the vessel, and the buoy is tied off along the same side of the boat as the anchor. The vessel is brought to a stop or an extremely slow speed. The anchor is lowered to be partially suspended in the water before release, minimizing splash disturbance. The “trip wire” is released, dropping the anchor allowing the chain/nylon rope to thread into the water and finally untying and releasing the buoy. If released with a crane versus a “trip wire”, the anchor is also partially suspended in the water before completely released.

4. Timing: The placement of the buoy occurs in a matter of minutes. The anchor drops at a rate of 10 feet per second, no matter the size.

5. Buoy design standards: The Coast Guard and Washington State Department of Transportation regulate the size, the material, and the scope used for the buoy, line and anchor. Each U.S. Coast Guard District regulates specific

standards for design and placement. The U.S. Coast Guard 13th District regulates all navigable waters in Washington State. Channel buoy design requirements are described in the Boat Handling Guide from Boat/U.S. Foundation in Alexandria, Virginia.

b. Placement of a pile or dolphin as aids to navigation: Pile or dolphin placement is proposed only in marine/estuarine waters, excluding for the mouth of the Columbia River (Baker Bay). Pile and dolphin placement are only proposed as part of this programmatic biological evaluation for marine areas, not any freshwater areas or the Columbia River.

1. Equipment used: The equipment used includes a barge-mounted pneumatic pile driver, standard drop-hammer, or vibratory pile driver, barge averaging 50-by 100-feet (5,000 square feet), a tug boat, one pile or one dolphin (three piles with $\frac{3}{4}$ " cable tie), either steel or wood treated (no creosote or pentachlorophenol) would be used for the pile and/or dolphin, signage (usually metal), shorelight, and a solar powered battery to be placed on the dolphin.
2. Access: The pile placement is accessed by a barge positioned by a tug boat. Barges may be as long as 500 feet. The length of barge used depends on the depth of pile or dolphin placement. The barge anchors into position by dropping "spuds" – large steel piles that act as anchors at each corner of the barge. The tug boat is a maximum of 60 feet in length with engine power equivalent to an 100-foot long pleasure vessel.
3. Placement: The pile driving would be performed with a barge mounted, pile driver. A crane on the pile driver lowers a pile into the water until it rests in place on the bottom of the waterbody. The pile is attached to a special rail system that allows precise placement of the pile. A heavy weight runs along a similar track system. The weight is then repeatedly dropped onto the upper end of the pile, driving the pile into the bottom of the waterbody. For dolphins, three piles are driven in at an angle and tied together on top with a $\frac{3}{4}$ " cable. The pile or dolphin is placed at a minimum depth of 8 feet high water and a maximum depth of 45 feet at high water (fresh or marine). After the pile or dolphin is driven, then the signage, shore light and battery are attached by hand using a welder, an hydraulic hammer or a drill (depending on material).
4. Timing: Total construction time is less than one day.
5. Design standards: Design standards for the signage and lighting requirements are regulated by the U.S. Coast Guard. Description of the U.S. Coast Guard Lighting Standards may be found in the Inland Navigation Lighting Provisions [33 CFR Parts 84, 87, 88, and 90]. Each U.S. Coast Guard District regulates specific standards for design and placement. The U.S. Coast Guard 13th District regulates all navigable waters in Washington State.

6. Action Area Description: The action area includes all navigable fresh and marine/estuarine waters in Washington State.

a. For all Fresh Waters in Washington State *excluding* the Columbia River mainstem: The action area for placement of aids to navigation is the location of the navigation aid (the structure or buoy), the length of the line and placement of the anchor for buoys, the buoy swing around the anchor (an average radius of 5 feet), 25 feet radius² around the anchor for potential water quality impacts due to anchor placement. There is no interrelated and/or interdependent work in any upland or wetland areas that would be considered designated critical habitat.

b. For the Columbia River mainstem in Washington State, *including* Snake River and Baker Bay: The action area for placement of aids to navigation is the location of the navigation aid (the structure or buoy), the length of the line and placement of the anchor for buoys, the buoy swing around the anchor (an average radius of 5 feet), 25 feet radius³ around the anchor for potential water quality impacts due to anchor placement. There is no interrelated and/or interdependent work in any upland or wetland areas that would be considered designated critical habitat.

c. For all Marine/Estuarine Waters in Washington State *excluding* Baker Bay: The action area for placement of aids to navigation is the location of the navigation aid (the pile, dolphin, or buoy), the length of the line and placement of the anchor for buoys, the buoy swing around the anchor (an average radius of 5 feet), 25 feet radius⁴ around the anchor, pile, dolphin or spuds from the barge for potential water quality impacts due to anchor placement or pile driving, and 1,000 feet radius⁵ around the pile or dolphin for noise impacts associated with the pile driving. There is no interrelated and/or interdependent work in any upland or wetland areas that would be considered designated critical habitat.

7. Species and Habitat Information:

a. Species Present: ⁶

² The determination of impact area for potential water quality impacts is based on personal communication with John Malek, Sediment Management, Environmental Protection Agency, on May 10, 2000. Mr. Malek stated that typically turbidity impacts of a pile driving, anchor placement or the like would not exceed a 15-foot radius, a 25-foot radius is the maximum extent of impact, regardless of substrate type and currents at a project site.

³ Ibid.

⁴ Ibid.

⁵ The determination of impact area for noise impacts associated with pile driving of 1000-foot radius around the pile is based on information provided in Feist, 1991.

⁶ Other listed or proposed plants or animals may occur in the project area. However, this document addresses only listed or proposed fish species. Review of impacts to other listed or proposed species will be done on a case-by-case basis.

1. For all Fresh Waters in Washington State *excluding* the Columbia River mainstem and its tributaries: Puget Sound chinook salmon - status threatened (designated critical habitat); Hood Canal chum salmon - status threatened (designated critical habitat); Coastal/Puget Sound bull trout - status threatened; Ozette Lake sockeye salmon - status threatened (designated critical habitat); SW Washington/Columbia River/Coastal cutthroat trout - proposed threatened; and, Puget Sound coho salmon - candidate species.

2. For the Columbia River mainstem and its tributaries in Washington State, *including* Snake River and Baker Bay: Snake River sockeye salmon - status endangered (designated critical habitat); Snake River spring/summer chinook salmon - status threatened (designated critical habitat); Snake River fall chinook salmon - status threatened (designated critical habitat); Snake River steelhead - status threatened (designated critical habitat); Columbia River chum salmon - status threatened (designated critical habitat); Columbia River bull trout – status threatened; Lower Columbia River steelhead – status threatened (designated critical habitat); Lower Columbia River chinook salmon – status threatened (designated critical habitat); Middle Columbia River steelhead – status threatened (designated critical habitat); Upper Columbia River steelhead – status endangered (designated critical habitat); Upper Columbia River spring chinook salmon – status endangered (designated critical habitat); Upper Willamette River chinook salmon – status threatened (designated critical habitat); Upper Willamette steelhead – status threatened (designated critical habitat); and, SW Washington/Columbia River/Coastal cutthroat trout – proposed threatened.

3. For all Marine/Estuarine Waters in Washington State, *excluding* Baker Bay: Puget Sound chinook salmon, status threatened (designated critical habitat), Hood Canal chum salmon, status threatened (designated critical habitat), Coastal/Puget Sound bull trout, status threatened, Ozette Lake sockeye salmon, status threatened (designated critical habitat), SW Washington/Columbia River/Coastal cutthroat trout, proposed threatened, and, Puget Sound coho salmon, candidate species.

b. Species Utilization: Refer to Appendix B - Species Life Histories.

8. Activity History and Status: The following table is a breakdown of the number of Nationwide Permit 1 (NWP 1 - Aids to Navigation) verifications authorized by the Corps of Engineers (Corps). The breakdown is organized by year and waterbody. The waterbody includes all creeks, streams, and unnamed tributaries that flow into it. Each of the waterbodies is categorized as below:

a. Marine: All marine waters within Washington State (i.e., Pacific Ocean, Willapa Bay, Grays Harbor, Strait of Juan de Fuca, Strait of Georgia, Puget Sound, Hood Canal, Sammish Bay, Skagit Bay, Totten Inlet, Dabob Bay, Commencement Bay, etc.). Because of the design of the Corps database, it was

not possible to separate out tidal areas from minor freshwater creeks, streams, and unnamed tributaries that flow into these waterbodies.

b. Fresh: All freshwaters within Washington State including all rivers, tributaries, lakes, and reservoirs (regardless of size) and excluding the mainstem Columbia River. (i.e., Snoqualmie River, Skagit River, Puyallup River, Nisqually River, Cowlitz River, Yakima River, Wenatchee River, Snake River, Pend Oreille River, Lake Washington, Lake Sammamish, Lake Chelan, Moses Lake, Baker Lake, Spanaway Lake, etc).

c. Columbia River: Mainstem Columbia River within Washington State, including the Snake River, Baker Bay, and lakes and reservoirs (i.e. Lake Entiat, Lake Wallula, Franklin D. Roosevelt Lake, Priest Rapids Lake, etc). Data for all tributaries are included under “freshwater” areas.

To determine the number of authorized “aids to navigation” verifications, all finalized permit actions were queried against the key word “NWP 1.” NWP 1 activities do not require “notification” to the Corps so the data set below represents only those activities where the Corps was notified and a verification was actually issued. NWP 1 activities are for Rivers and Harbors Act Section 10 waters only, therefore the data set represents activities authorized within navigable waters. The following data includes before– and, when applicable, after-the-fact authorizations. In comparing the Corps database with one year of data from WDFW (1998) for other activities (WDFW information does not separate aids to navigation from other buoys, piling, piers, or floats), the Corps database represents less than 1 % of the actual number of aids to navigation.

Table 1: Historical Record of Corps Authorization of Aids to Navigation

WATERBODY	1995	1996	1997	1998	1999
Marine	2	1	0	0	0
Fresh	0	1	0	0	0
Columbia River	0	0	0	0	0
TOTAL	2	2	0	0	0

Because no notification is required for NWP1, the Corps acknowledges that tracking of aids to navigation activities has been inconsistent and infrequent. In light of the recent listings under ESA, the Corps proposes to track these activities as outlined in the “Programmatic Biological Evaluation Notification and Tracking Description”.

9. Environmental Baseline: Refer to Appendix C – Environmental Baseline.

10. Effects of the Action:

a. Direct Effects - Placement of buoys as aids to navigation: Because the effects, whether marine or freshwater areas, are relatively the same for all the listed or

proposed fish species, the effects analysis does not distinguish between waterbody or species type. Being placed at an average depth of 45 feet at high water (no shallower than 20 feet at high water), the action area is generally used as an adult fish migratory corridor, with juveniles staying in the shallower waters. Effects to listed or proposed fish species associated with the placement of buoys for aids to navigation in any of the waters of the U.S. in Washington State are outlined below:

1. Water quality (anchor placement): Temporary water quality impacts may occur with the placement of buoys as aids to navigation when the anchor drops and a small amount of sediment is temporarily suspended in the water column. Buoys are usually placed during “slack tide” when the water is relatively still. Because the anchor drops in a matter of seconds and settles, sediment suspension is unlikely to exceed a radius of 25 feet from the anchor and would settle out of the water column to background levels in no more than an hour, depending on sediment type and currents. If the anchor is not installed properly or the weight is not sufficient, the anchor could drag along the substrate, causing additional sediment suspension. The Corps’ experience is that this is rare. Buoys will be anchored securely so that the anchor line does not drag. All temporary water quality impacts associated with the anchor placement are insignificant and/or discountable.

2. Water quality (propwash): The boat placing the buoy is likely to cause some sediment suspension associated with propwash. The boat is stopped or moving extremely slowly during anchor placement so the disturbance with the propwash is extremely small. If a tug and barge are used, the placement is done very quickly (matter of minutes) and the work is done in the approved work window when listed or proposed fish species are less likely to be present. Any turbidity associated with propwash from the boat or tug and barge would settle out of the water column to background levels in no more than an hour, depending on depth, sediment type and currents. All temporary water quality impacts are insignificant and/or discountable.

3. Habitat Health: If a buoy is placed over or adjacent to vegetated shallows, the placement of the buoy and propwash from the vessel placing the buoy could destroy areas of the vegetated shallows. Vegetated shallows provide refuge for juvenile salmonids and support forage species that the listed or proposed fish species are dependent upon, such as invertebrates for juvenile salmonids and forage fish for adult salmon. For example, herring spawn in eelgrass beds in marine areas. Boat activity near or adjacent to vegetated areas has been documented to damage and/or destroy the vegetated areas. (NOAA, 1998) To be covered by this informal consultation, the buoys will be placed so that the vessel and buoy are not over or adjacent to vegetated shallows. The substrate may support benthic invertebrates that juvenile listed or proposed fish species are dependent upon for forage. Buoy anchors will be weighted and installed so that the anchor line does not drag, disturbing the substrate and associated

habitat. Using this method of installation, impacts to habitat health are insignificant and/or discountable.

b. Direct Effects - Placement of a pile or dolphin (new structures) as aids to navigation: The addition of one pile or one dolphin applies only to marine/estuarine waters excluding for the mouth of the Columbia River (Baker Bay). Because the effects are relatively the same for all the listed or proposed fish species, the effects analysis does not distinguish between species type. Effects of the placement of one pile or dolphin when used as aids to navigation are outlined below:

1. Water Quality (pile driving, spud placement, and propwash): Pile driving and spud placement to anchor the barge will have a temporary impact on water quality. As each pile is driven or each spud is placed into the substrate, a turbidity plume is created. The plumes will be small, localized and will dissipate quickly. Based on discussions between the Corps, USFWS, and NMFS in Informal Consultation Batch Meeting for structures in Lake Washington, the “plume” is unlikely to exceed a radius of 25 feet from the pile or dolphin and would settle out of the water column to background levels in no more than an hour, depending on sediment type and currents. Propwash impacts would only occur when the tug is either situating the barge in place or removing the barge. The work is done in the approved work window when listed or proposed fish are less likely to be present. Any turbidity associated with propwash from the tug and barge is relatively short-term and would settle out of the water column to background levels in no more than an hour, depending on depth, sediment type and currents. To ensure that sediment suspension impacts are discountable, the pile driving for the pile or dolphin and the anchoring of the barge will only occur during approved work windows when listed, proposed or forage fish species are least likely to be present. The impacts to water quality due to pile driving and spud placement are insignificant and/or discountable.

2. Water Quality (pile treatment and slag): No piles treated with creosote or pentachlorophenol will be used in marine/estuarine waters, in order to be covered under this informal consultation. Studies by NMFS have shown that the primary metal of concern in pile treatment is copper as it is the “most acutely toxic”. (NMFS, 1998.) Copper has been shown to be the most actively leaching metal with arsenic and chromium rating second. (Warner and Solomon, 1990.) About 300 compounds including polycyclic aromatic hydrocarbons (PAHs) – which are also known to be very toxic and bioconcentrate - are found in creosote. (NMFS, 1998) Exposure to these chemicals could result in the death of both adults and juveniles of the listed or proposed fish species or prey organisms. (NMFS, 1998.) Dioxins are found in pentachlorophenol. When wood is treated with pentachlorophenol, the dioxins are likely to leach into the water column. Exposure of female fish species, including salmon and trout, to dioxins and dioxin-like contaminants cause increased larval mortality. (Hornung, et al, 1998). There is the potential for slag to enter the water column when signs are welded

to the pile or dolphin. The amount of slag from welding one sign would be no more than 1 square inch. This amount is so small that any impact to water quality is insignificant and/or discountable. Using these methods of installation, adverse effects associated with pile treatment and/or slag are insignificant and/or discountable.

3. Habitat Health (noise from pile driving): Pile driving can cause a considerable amount of noise. The impact of the weight causes sound waves to radiate outward. Studies conducted in estuarine areas in Puget Sound indicate, though inconclusively, that the sound waves generated by pile driving frighten juvenile pink and chum salmonids in estuaries away from the pile driver (Feist, 1991). The effects of the pile driving were observed up to 1000 feet away. The juvenile salmonids fled, and remained away from the area during active pile driving, and for a short time after the pile driving stops (Feist, 1991). No conclusive evidence was found to show any long term effects on juvenile growth rates or feeding patterns from the sound waves created from pile driving (Feist, 1991). Tests showed the fish had been actively feeding during the pile driving (Feist, 1991). Juveniles apparently moved to other feeding areas and returned shortly after the pile driving ceased (Feist, 1991). There is no reason to believe that listed or proposed salmonids would act differently. In order to ensure that adult and juvenile listed or proposed fish species will not be disturbed by the noise pile driving, the pile driving for the pile or dolphin will only occur during approved work windows when listed, proposed or forage fish species are least likely to be present. Using this method of installation, impacts to water quality due to pile driving are insignificant and/or discountable.

4. Habitat Health (pile driving impacts to vegetated shallows): The pile driving and any propwash associated with the tug boat or pile driving barge could destroy vegetated shallows. The vegetated shallows support forage species that the listed or proposed fish species are dependent upon, such as herring spawning in eelgrass beds in marine areas. Boat activity in or adjacent to vegetated shallows has been documented to damage and/or destroy vegetated shallows. (NOAA, 1998) To be covered by this informal consultation, the pile or dolphin will be placed so that the tug boat, barge, and pile/dolphin are not over or adjacent to vegetated shallows and the barge will not ground out. Using this method of installation, impacts to habitat health are insignificant and/or discountable.

c. Indirect Effects: There are no effects that would result from this activity that are later in time.

d. For all other pathways and indicators not specifically mentioned above, the activity will not alter the present environmental baseline.

e. Determination of Effect: Aids to navigation may affect but are not likely to adversely affect the listed fish species identified above and any designated

critical habitat, will not jeopardize proposed fish species, or destroy or adversely modify proposed critical habitat identified above, provided that:

1. For Fresh Waters *excluding* the Columbia River mainstem:
 - Buoys and anchors are not located over or adjacent to vegetated shallows (except where such vegetation is limited to State-designated noxious weeds) or spawning habitat for listed or proposed fish species.
 - No trenching occurs through any water of the U.S. (i.e., for electrical cables).
 - No new piling is placed.
 - Flotation shall be completely contained to prevent breakup.
 - Buoys are anchored securely and anchors are installed so that anchor lines do not drag.
 - If a barge is used, the barge does not ground out.
2. For the Columbia River mainstem *including* Snake River and Baker Bay:
 - Buoys and anchors are not located over or adjacent to vegetated shallows (except where such vegetation is limited to State-designated noxious weeds) or spawning habitat for listed, proposed or forage fish species.
 - No trenching occurs through any water of the U.S. (i.e., for electrical cables).
 - No new piling is placed.
 - Flotation shall be completely contained to prevent breakup.
 - Buoys are anchored securely and anchors are installed so that the anchor lines do not drag.
 - If a barge is used, the barge does not ground out.
3. For Marine/Estuarine Waters *excluding* Baker Bay:
 - Work is done within the approved work window.
 - Structures are not located over or adjacent to vegetated shallows.
 - No trenching occurs through any water of the U.S. (i.e., for electrical cables).
 - The pile is not treated with creosote or pentachlorophenol.
 - All piling or dolphins are capped with a device to preclude perching by piscivorous birds.
 - If a barge is used, the barge does not ground out and the barge is not over or adjacent to vegetated shallows (except where such vegetation is limited to State-designated noxious weeds)
 - Flotation shall be completely contained to prevent breakup.
 - Buoys are anchored securely and anchors are installed so that the anchor lines do not drag.
 - If a barge is used, the barge does not ground out.