UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

September 19, 2003

Colonel Timothy J. Gallagher
District Engineer, Alaska District
Corps of Engineers
P.O. Box 898
Anchorage, AK 99506-0898

RE: Vanderbilt Creek 7
4-1991-0566

Attn: Randal P. Vigil

Dear Colonel Gallagher:

The National Marine Fisheries Service (NMFS) has reviewed the proposal by Mr. Hugh Grant to place approximately 9,300 cubic yards of clean sand and gravel within 2.3 acres of intertidal emergent wetlands. The purpose of the project is to provide building and parking pads for future commercial/retail development. On May 11, 1998 and again on June 3, 1998 NMFS submitted review letters to the Corps regarding this proposed project and recommended permit denial (copies enclosed). The current proposal is identical to the previously reviewed proposal and does not offer any additional information, comments, proposed resolution of issues, alternative site analysis, or rebuttal to our objections. This project as proposed may result in substantial and unacceptable impacts to aquatic resources of national importance as defined in Part IV, 3. (a) of the Memorandum of Agreement between the Department of Commerce and the Department of the Army (August 11, 1992) and described in detail below.

This estuarine wetland has been identified as Essential Fish Habitat (EFH) pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, because it contains habitat important for spawning, breeding, feeding and growth to maturity for coho salmon. Its habitat functions are high and critically important to fish in the adjacent and interconnected Vanderbilt Creek and Mendenhall Wetlands. This productive estuarine wetland is hydrologically connected to a major anadromous fish stream (Vanderbilt Creek) and a wildlife refuge. Its habitat values and hydrologic functions are important and should be maintained.

Estuarine wetlands are uncommon in the region and are very important to fish and wildlife. Many invertebrate species that are important food sources for juvenile fish live within the intertidal zone proposed for fill. They provide vital support functions for many other species. They are a source of food for invertebrates and benthic organisms and they offer shelter from predators, thereby increasing rates of individual survival.

The fill footprint of this project extends on the southeast side to within 25 feet of Vanderbilt Creek, cataloged by the Alaska Department of Fish and Game (ADF&G) as an anadromous fish stream (Juneau Quad, B-2, #111-40-10125) that supports chum, pink and coho salmon and Dolly

Varden char. Intersecting the fill footprint to the west are two sloughs feeding into a drainage slough that also supports anadromous fish. NMFS and U.S. Fish and Wildlife Service biologists visited the site on April 29, 1998 and observed several schools of salmonid fishes in the drainage slough. These fish have direct access to the sloughs that are proposed to be filled, and available information suggests that they continue to use that habitat today.

The ADF&G sampled both Vanderbilt Creek and the drainage slough periodically from early July to late September 1997. Copies of sampling results were attached to our May 1998 letter. Results show that both water bodies are used as rearing habitat during mid to late summer by coho salmon and Dolly Varden char.

The Juneau Wetlands Functions and Values report (Adamus, 1987) describes the habitat and fish species present in Vanderbilt Creek. It also provides a historical perspective on the cumulative degradation of the stream. The report recognizes that Vanderbilt Creek provides "outstanding rearing habitat" for anadromous fish and states that "winter surveys in one of its lower channels yielded the highest population densities of any study area stream" and, "perhaps one of the highest densities for a stream of such small size for all of Southeast Alaska. Large, older-year-class individuals comprised a majority of the fish sampled. While other streams in Southeast Alaska provide larger total escapements of salmon, their habitat productive capacity (per unit area) has not been shown to be as great as here."

The proposed project would permanently remove an important intertidal habitat from this watershed. The project is located at high water elevations of 16+ to 18+ feet. High intertidal habitat is necessary for out-migrating anadromous fish to acclimate to a saline environment. Without such high intertidal habitat for smolt transformation to occur, juvenile coho salmon in particular are susceptible to high mortalities when migrating to marine waters. In addition, this area is a buffer between the existing parking lot and the entire intertidal/stream complex. If it is filled, impacts from development will be extended further into the system. The 25 foot proposed buffer does not meet the minimum 50 foot, no-build set back standard of the City and Borough of Juneau for anadromous waters. Because the stream and wetlands are functional rearing habitat, even a 50-foot riparian set back would be inadequate in this case.

Project effects would include alteration of flow patterns, introductions of hydrocarbons from vehicles and introduction of sediment from snow removal activities. Although the design for this project previously identified use of an oil water separator, a storm water treatment plan has not been submitted for review. Parking lots are sources of hydrocarbons to anadromous waters, and those pollutants are of particular concern because very low levels damage developing salmon eggs, fry and larvae. Pink salmon larvae (which, along with chum salmon spawn in Vanderbilt Creek) exposed to various levels of oil contamination revealed that tissue uptake of polynuclear aromatic hydrocarbons (PAH) was mediated by oil's dissolution in water, with significant biological effects occurring when the peak total PAH concentration was as low as 4.4 micrograms per liter (Marty, et al., 1997). Water quality in Vanderbilt Creek and associated intertidal habitats would be adversely affected by the proposed development.

NMFS offers the following EFH Conservation Recommendation pursuant to Section 305(b)(4)(A) of the Magnuson-Stevens Act: the Corps of Engineers should deny the permit for discharge of fill because an alternative upland site analysis has not been provided, the identified purpose and need for this project is not water dependent, and the project would exacerbate cumulative impacts to the interconnected wetlands and salmon habitat in the project area.

The Clean Water Act 404(b)(1) guidelines presume that for non-water dependent uses, reasonable alternatives are available that would achieve the purpose for which the proposed work is being conducted while avoiding the filling of wetlands. Alternative locations should be thoroughly addressed before wetland habitats are sacrificed for commercial development. The purpose of the water-dependency test is to recognize the special values of these habitats and to avoid their unnecessary destruction, particularly when less environmentally damaging practicable alternatives are available to achieve the basic purpose of the proposal (40 CFR 230.10). Construction in uplands will likely have less impact on valuable fish habitat.

If the Corps proceeds further toward authorization of this project, the Corps should require extensive mitigation for any unavoidable adverse impacts from fill in EFH. NMFS requests an opportunity to review any proposed mitigation plan before the Corps issues a permit for this project. Information necessary to further assess the effects of this project on the sensitive habitats proposed for fill includes: 1) complete inventories of fish use by species, life stage and season, 2) mapping of mean and extreme high tide contours, 3) mapping of all sloughs and channels of Vanderbilt Creek including connectivity to other streams and the Mendenhall Wetlands State Game Refuge, and 4) mapping of estuarine and palustrine dependent plant communities.

Under section 305(b)(4)(B) of the Magnuson-Stevens Act the Corps is required to respond in writing within 30 days to these recommendations. If the Corps will not make a decision within 30 days, the Corps should provide NMFS with a letter within 30 days to that effect, and indicate when a full response will be provided.

Susan Walker is the NMFS contact person for this project. She may be reached at 907-586-7510.

Sincerely,

For James W. Balsiger
Administrator, Alaska Region

Enclosures (2)

cc: Mr. Hugh Grant, applicant
EPA Juneau (Chris Meade)
ADEC; ADF&G; ADNR - OMHP; USFWS, Juneau

LITERATURE CITED

Adamus, Paul. 1987. Juneau Wetlands, Functions and Values. City and Borough of Juneau.

Marty, G.D., J.W. Short, D.M. Dambach, N.H. Willits, R.A. Heintz, S.D. Rice, J.J. Steeman, D. E. Hinton. 1997. Ascites, premature emergence, increased gonadal cell apoptosis, and cytochrome P4501A induction in pink salmon larvae continuously exposed to oil-contaminated gravel during development. Can. J. Zool. 75:989-1007.

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

File

May 11, 1998

Enclosure #1

Colonel Sheldon L. Jahn
District Engineer, Alaska District
Corps of Engineers
P.O. Box 898
Anchorage, AK 99506-0898

RE: Vanderbilt Creek 7
4-910566

Attn: Susan J. Hitchcock

Dear Colonel Jahn:

The National Marine Fisheries Service (NMFS) has reviewed the proposal by Mr. Hugh Grant to place approximately 9,300 cubic yards of clean sand and gravel within 2.3 acres of intertidal emergent wetlands. The purpose of the project is construction of a commercial retail complex, including two structures with parking and loading areas and an approximate 30' wide by 50' long access road including the placement of 6 pilings for the construction of a 30' wide by 20' long bridge.

The fill footprint of this project extends on the southeast side to within 25 feet of Vanderbilt Creek, an Alaska Department of Fish and Game (ADF&G) cataloged anadromous fish stream (Juneau Quad, B-2, #111-40-10125) that supports chum, pink and coho salmon and Dolly Varden char. Intersecting the fill footprint to the west are two sloughs feeding into what is identified as a drainage slough that is also anadromous and will be included in the May version of the catalog. NMFS and U.S. Fish and Wildlife Service biologists visited the site on April 29, 1998 and observed several schools of salmonids in the drainage slough. These fish have direct access to, and therefore undoubtedly utilize, the sloughs to be directly filled.

The ADF&G sampled both Vanderbilt Creek and the drainage slough (they identified this slough as "Dump Tributary") last year periodically from early July to late September. Copies of sampling results are attached. Results show that both water bodies are being utilized as rearing habitat during mid to late summer by coho salmon and Dolly Varden char.

The Juneau Wetlands Functions and Values report (Adamus, 1987) describes the habitat and fish species present in Vanderbilt Creek at that time. It also provides a historical perspective on the cumulative degradation of the stream.

The report recognizes Vanderbilt Creek as "outstanding rearing habitat" for fish. Further it states that "winter surveys in one of its lower channels yielded the highest population densities of any study area stream" and "perhaps one of the highest densities for a stream of such small size for all of Southeast Alaska." "Large, older-year-class individuals comprised a majority of the fish sampled. While other streams in Southeast Alaska provide larger total escapements of salmon, their habitat productive capacity (per unit area) has not been shown to be as great as here."

Negative impacts to the stream reported included sedimentation from gravel mining in the headwaters, possible leachate from the garbage dump, and re-direction of the section below Glacier Highway in the 1970s due to stream-side commercial development, which is apparently a reference to the existing fill bordering the proposed project.

The proposed project will permanently remove an important inter-tidal habitat from this watershed. The project is located at high water elevations of 16+ to 18+ feet. High inter-tidal habitat is necessary for out-migrating fish to acclimate to a saline environment. Without such high inter-tidal habitat, coho smolt in particular are susceptible to high saline conditions. In addition, this area is a buffer between the existing parking lot and the entire intertidal/stream complex. If it is filled, impacts from the parking lot will be extended further into the system. The 25 feet proposed buffer does not meet the minimum 50 foot, no-build set-back standard of the City and Borough of Juneau for anadromous waters. Because the stream and wetlands function in concert to provide habitat, even the 50 foot set-back would be inadequate in this case.

Such impacts include alteration of flow patterns, introductions of hydrocarbons from vehicle leaks and introduction of sediments from snow removal activities. Although the design for this project includes identification of an oil- water separator, a storm-water treatment plan has not been submitted for review. Parking lots as a source of hydrocarbons to anadromous waters are of particular concern because they are damaging to developing salmon eggs, fry and larvae at surprisingly low levels. Pink salmon larvae (which, along with chum salmon spawn in the intertidal of Vanderbilt Creek) exposed to various levels of oil contamination revealed that tissue uptake of polynuclear aromatic hydrocarbons (PAH) was mediated by oil's dissolution in water, with significant biological effects when the peak total PAH concentration was as low as 4.4 micrograms per liter (Marty, et al., 1997). The oil-water separator must therefore be of a design and maintained in a manner to preclude such low levels from occurring in the inter-tidal/stream complex. Without information that the parking lot is correctly designed to meet such a standard and independent inspection to ensure that maintenance schedules are adequate, water quality cannot be assured by the mere presence of an oil-water separator.

Given the high value of Vanderbilt Creek and surrounding wetlands to fisheries habitat, cumulative encroachment of the high inter-tidal, nature of the proposed project as non-water dependent, and presumption of the Clean Water Act 404(b)(1) guidelines that alternatives exist to filling of wetlands, which are special aquatic sites, we recommend denial of the permit.

This project may result in substantial and unacceptable impacts to aquatic resources of national importance as defined in Part IV, 3.(a)of the Memorandum of Agreement between the Department of Commerce and the Department of the Army (August 11, 1992).

Further, it is the understanding of the NMFS that the applicant has a number of outstanding violations related to existing developments adjacent to this project. Consistent with stated policy of the Corps, this application should not be processed until those violations are resolved.

If you have any further questions, please contact Linda Shaw of my staff at 907-586-7510.

Sincerely,

Steven Pennoyer
Administrator, Alaska Region

cc: Mr. Hugh Grant, applicant
EPA Anchorage (Mark Jen)
ADEC, AADGC, ADF&G, ADNR, USFWS, Juneau

LITERATURE CITED

Adamus, Paul. 1987. Juneau Wetlands, Functions and Values. City and Borough of Juneau.

Marty, G.D., J.W. Short, D.M. Dambach, N.H. Willits, R.A. Heintz, S.D. Rice, J.J. Steeman D. E. Hinton. 1997. Ascites, premature emergence, increased gonadal cell apoptosis, and cytochrome P4501A induction in pink salmon larvae continuously exposed to oil-contaminated gravel during development. Can. J. Zool. 75:989-1007.

VANDERBILT CREEK -- Dump Trib										
REARING						SPAWNING				
DATE SET	DATE PULLED	SOAK TIME	COHO	DOLLY VARDEN	NOTES	DATE COUNTED	PINK	CHUM	COHO	NOTES
8-Jul	9-Jul	23.25	1	0	set 3,many scu./stic.					
15-Jul	16-Jul	21.25	5	0	set 4, many stic.					
22-Jul	23-Jul	27.33	3	1	set 4 ,many scul./stic.					
29-Jul	30-Jul	22.5	3	0	set 2 traps; 1 sc. 40 sb					
10-Sep	11-Sep	23.5 hr.	0	0	2 traps 6 sculp 28 sb					
18-Sep	19-Sep	23.5 hr.	1	0	2 traps					
23-Sep	24-Sep	23.5 hr.	4	0	2 traps					

VANDERBILT CREEK											
REARING						SPAWNING					
DATE SET	DATE PULLED	SOAK TIME	COHO	DOLLY VARDEN	NOTES	DATE COUNTED	PINK	CHUM	COHO	NOTES	
1-Jul	2-Jul	25 hr.	16	66	set 6,many scu./stic.						
8-Jul	9-Jul	23.25 hr.	10	108	set 6, many scu.						
15-Jul	16-Jul	21.25	11	61	set 6,2 scu.	22-Jul	0	4lv.,1de.	0	count in index area	
22-Jul	23-Jul	27.5	28	127	set 6, 6scul.	23/7	0	15 lv.,0 de	0	count in index area	
29-Jul	30-Jul	23	16	27	set 6;4 sculpin	30-Jul	2	59lv. 0 de	0	from Egan to culvert	
5-Aug	6-Aug	18.33	14	53	11,scul	8\5	8	23lv. 20de.		count in index area	
10-Sep	11-Sep	23.5 hr.	24	9	6 traps sb's	8/12/97	54lv. 13d	12lv. 75de.		from Egan to culvert	
9/18/97	19-Sep	23 hr.	11	1	6 traps 3 SB	8/27/97	215/ 110	8lv 93de			
23-Sep	24-Sep	23.5 hr.	20	10	6 traps	9/8/97	28Lv,170d	0Lv,78de			

Linda Shaw
May 4, 1998
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FAX to COE 907-753-5567

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

June 3, 1998

Enclosure #2

Colonel Sheldon L. Jahn
District Engineer, Alaska District
Corps of Engineers
P.O. Box 898
Anchorage, AK 99506-0898

E: Vanderbilt Creek 7
4-910566

Attn: Susan J. Hitchcock

Dear Colonel Jahn:

The National Marine Fisheries Service (NMFS) has reviewed the referenced proposal by Mr. Hugh Grant to place approximately 9,300 cubic yards of clean sand and gravel within 2.3 acres of intertidal emergent wetlands and provided comments to you in our May 4, 1998 letter.

We continue to recommend denial of the permit and wish to reserve our elevation option. Accordingly, the NMFS believes that this project will result in substantial and unacceptable impacts to aquatic resources of national importance as defined in Part IV, 3.(b) of the Memorandum of Agreement between the Department of Commerce and the Department of the Army (August 11, 1992). If you have any further questions, please contact Linda Shaw of my staff at 907-586-7510.

Sincerely,

Steven Pennoyer
Administrator, Alaska Region

cc: Mr. Hugh Grant, applicant
EPA Anchorage (Mark Jen)
ADEC, AADGC, ADF&G, ADNR, USFWS, Juneau